JACKSON LIBRARY - UNCG
3 0510 1255211 Q

DATE DUE

Interlibrary Loan
Greensboro
DEC 1 1998 2
Interlibrary Loan
Chapel Hill, NC
APR 2 8 1998 L
Interlibrary Loan
Seattle, WA
JUN 0 1 1999
RETURNED
Interlibrary Loan
Mt. Pleasant, MI
AUG 25 2003 2
Interlibrary Loan
Mt Pleasant, Mi
NOV 10 2003 2

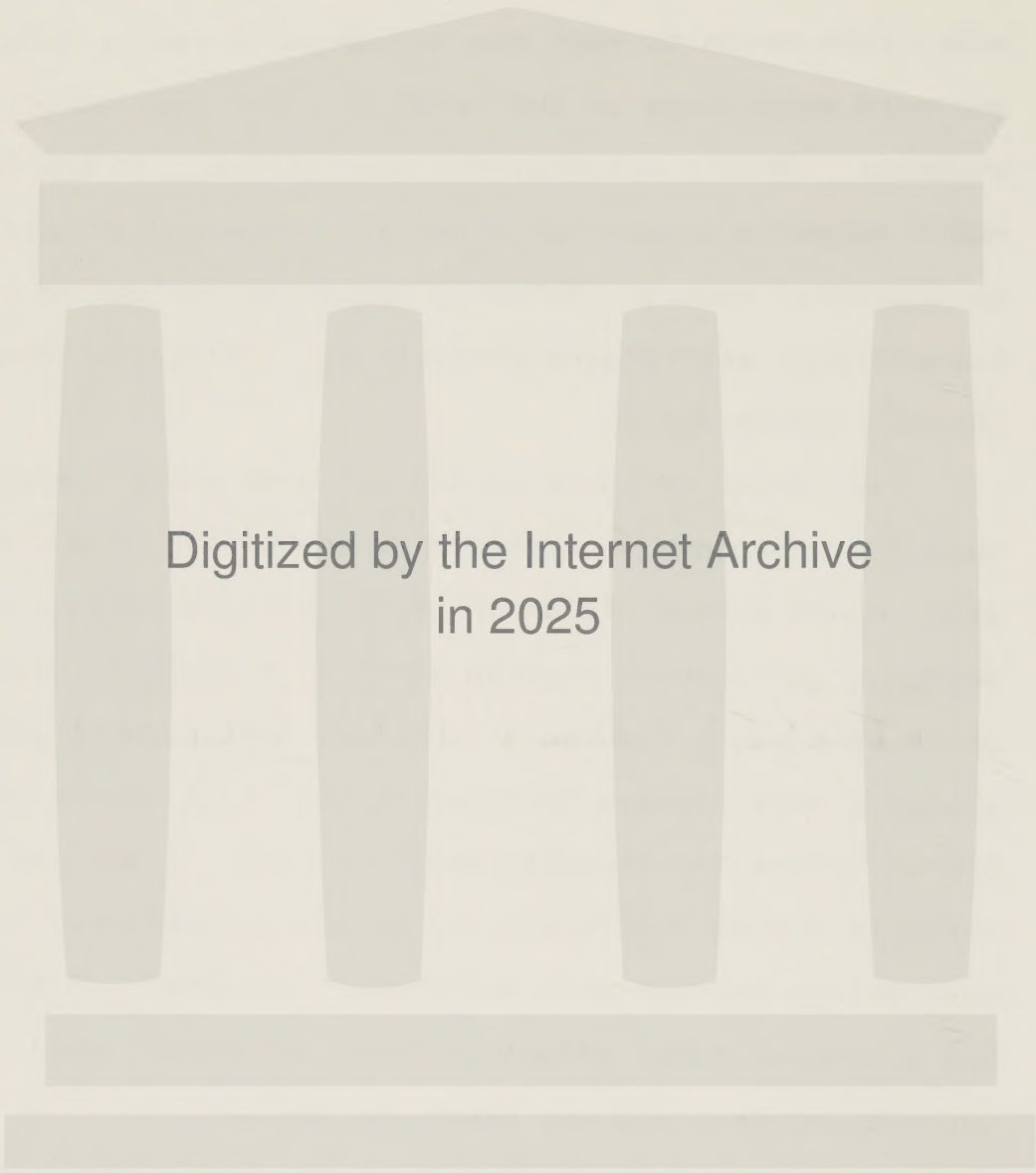
Walter Clinton Jackson Library
University of North Carolina at Greensboro
Greensboro, North Carolina 27412-5201

OK, KYUNGHEE Ph.D. Influence of Family and Work Experience on Occupational Aspirations of Adolescents: A Path Model. (1993) Directed by Dr. Sarah M. Shoffner. pp. 194

The purpose of this study was to develop a theoretical model from which to test the influence of family background and work experience on the level of rural high school students' (N=381) occupational aspirations. In the basic model mother's occupation directly influenced occupational aspirations, however, father's education influenced occupational aspirations directly but indirectly through academic achievement.

The number of hours worked per week had a direct and negative influence on academic achievement. In a different path, hours worked had an indirect positive influence on academic achievement through parents' different treatment which especially focused on the fact that parents gave students more freedom compared to the relationship they shared before the students began to work. Also, job characteristics indirectly influenced occupational aspirations through work attitudes. Academic achievement had a greater total effect on level of occupational aspirations than did any other variable.

The path model was tested on two gender groups (169 females and 189 males) and two grade levels (138 in 9th/10th and 281 in 11th/12th). The models for females and older students were more like the model for the whole group in


Digitized by the Internet Archive
in 2025

https://archive.org/details/influenceoffamil0000kyun

that academic achievement was a mediating variable between family background and occupational aspirations. For males, father's education and mother's occupation directly influenced occupational aspirations. Academic achievement did not enter the male model. Although the number of hours of working did not enter the male model, it negatively influenced females' academic achievement. It was recommended that this model be tested on an urban sample and in many regions of the country before making generalizations.

AS
36
N64
HES
93-3

INFLUENCE OF FAMILY AND WORK EXPERIENCE ON OCCUPATIONAL ASPIRATIONS OF ADOLESCENTS: A PATH MODEL

BY

Kyunghee Ok

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
1993

Approved by

Sarah M. Shoffner
Dissertation Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Dissertation Adviser Sarah M. Shoffner

Committee Members Rebecca M. Smith

J. Scott Smith

April 1, 1993
Date of Acceptance by Committee

March 23, 1993
Date of Final Oral Examination

ACKNOWLEDGMENTS

I wish to thank my committee chair, Dr. Sarah Shoffner, and committee members, Dr. Hyman Rodman and Dr. Scott Hinkle. They have provided valuable suggestions and thoughts, and they read the disseration carefully which enhanced the merit of this study. In addition, I am indebted to Dr. Rebecca Smith for the completion of this study. I received continuous support from her personally and professionally while I was completing this study.

In addition, I received inestimable support from the research group members, Bob Shackleford and Patricia Vedder, who provided insightful suggestions and continuing encouragement. My appreciation is expressed to Jane Ching for help in drawing the figures and to Judy Fulbright for assistance in managing the data.

I wish to express my appreciation to my family for their support emotionally and financially through the years. I am especially grateful to my mother, Okhoon Kim. I believe that my mother's persisting encouragement of my work enabled me to complete this project.

This study was partially supported by the North Carolina Agricultural Research Service, Cooperative State Research Service, United States Department of Agriculture, through Project 16076--"Rural Adolescent Employment, Academic Achievement, Psychological Maturity and Occupational Aspirations." The literature review and data analyses as well as the results of this study are in turn contributions to Project 16076.

TABLE OF CONTENTS

Page

LIST OF TABLES viii

LIST OF FIGURES xi

CHAPTER

I. INTRODUCTION 1

Purpose of the Study 6

Theories Underlying Occupational Aspirations 6

Status Attainment Theory 7
Developmental Theory 14
Social Learning Theory 18

Model of Occupational Aspirations 23

II. REVIEW OF THE LITERATURE 26

Family Background 27

Academic Performance 32

Work Experience 35

Hours of Working 35
Job Characteristics 41

Work and Family Relations 45

Work Related Attitudes 47

Gender 49

Cultural and Ethnic Influences 54

Summary 57

Page

III. METHODS 59

Description of the Original Sample . . . 59

Sampling Procedure 59
Subjects 60

Description of the Model 64

Measurement of Dependent Variable 65

Measurement of Independent Variables . . 68

Gender 68
Grade Level 68
Family Background 69
Academic Achievement 69
Hours Worked Weekly 69
Parent-Child Relationship 71
Commitment to School 73
Reading Books for Pleasure 74
Job Characteristics 77
Work Attitudes 77

Procedure for Path Analysis of the Model 78

IV. RESULTS AND DISCUSSION 84

Statistical Assumptions for Path Analysis 85

Testing the Theoretical Path Model . . . 87

Influence of Hours Working 90
Predictors of Academic Performance . . 91
Parent-Child Relationships 97
Predictors of Work Attitudes 97
Predictors of Occupational Aspirations 99

Revised Model and Decomposition 104

Testing the Occupational Aspirations Model for Gender and Grade Level . . . 109

Page

Occupational Aspirations by Gender . . 109
Female Students Group 109
Male Students Group 118
Occupational Aspirations
by Grade Level 124
Freshman and Sophomore Group . . . 124
Junior and Senior Group 128
Discussion 139

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS . . . 152

Summary and Conclusions 152

Recommendations 159

BIBLIOGRAPHY 164

APPENDIX 172

LIST OF TABLES

Table		Page
1.	Demographic Characteristics of High School Employment	61
2.	Parents' Socioeconomic Mean Index Score by Sex, Race, and Year in School	63
3.	Mean Occupational Aspiration by Gender, Class, Ethnicity, and GPA	67
4.	Summary of Subjects' Hours Worked Weekly	70
5.	Employed Students' Relationship with Parents and Grade Change	72
6.	Employed Students' Commitment to School	75
7.	Hours per Week Spent on Non Employment Activities Beyond School	76
8.	Items in Work Attitudes Factors	79
9.	Mean Factor Scores of Subjects' Work Attitudes	81
10.	Multiple Correlation Matrix for All Variables in Revised Model	89
11.	Five Separate Regressions on Hours of Working	92
12.	Regression of GPA on Family Background, Hours of Working, and Work Related Variables	94
13.	Regression of GPA on Family Background, Hours of Working, and Work Related Influences: Trimmed Model	96
14.	Two Regression Analyses on Parent-Child Relationship	97

Table | Page

15. Three Multiple Regressions for Predictors of Work Related Attitudes 100

16. Relationship between Occupational Aspirations and Family Background, GPA, and Work Related Attitudes 101

17. Relationship between Occupational Aspirations and Family Background, GPA, and Work Related Attitudes: Trimmed Model 103

18. Decomposition Table for the Revised Model of Occupational Aspirations for High School Students 106

19. Correlation Matrix for All Variables in Revised Model: Female Students 110

20. Relationship between Different Treatment Getting along with Parents, and Grade Change: Female Students 113

21. Relationship of GPA and Occupational Aspiration with Predictors: Female Students 114

22. Decomposition Table for the Occupational Aspirations of High School Students: Female Students 117

23. Correlation Matrix for All Variables in Revised Model: Male Students 119

24. Relationship of Social Acceptance and Occupational Aspiration with Predictors: Male Students 120

25. Decomposition Table for the Occupational Aspirations of High School Students: Male Students 123

26. Correlation Matrix for All Variables in Revised Model: Freshmen and Sophomores . . 125

Table Page

27. Predictors of GPA and Occupational Aspirations: Freshmen and Sophomores 127

28. Decomposition Table for the Occupational Aspirations of High School Students: Freshmen and Sophomores 130

29. Correlation Matrix for All Variables in Revised Model: Juniors and Seniors 132

30. Predictors of Different Treatment and Get along with Parents: Juniors and and Seniors 134

31. Predictors of Grade Change and Study Homework: Juniors and Seniors 135

32. Predictors of GPA and Occupational Aspirations: Juniors and Seniors 137

33. Decomposition Table for the Occupational Aspirations of High School Students: Juniors and Seniors 140

LIST OF FIGURES

Figure		Page
1.	Blau-Duncan's Model of Status Attainment . .	9
2.	The Wisconsin Model of Educational and Early Occupational Attainment	11
3.	A Path Model of Adolescent Occupational Aspirations	24
4.	Expanded Theoretical Path Model of Adolescent Aspirations	66
5.	Revised Path Model of Adolescent Occupational Aspirations	105
6.	Path Model of Adolescent Occupational Aspirations for Female Students	116
7.	Path Model of Adolescent Occupational Aspirations for Male Students	122
8.	Path Model of Adolescent Occupational Aspirations for Freshmen & Sophomores . . .	129
9.	Path Model of Adolescent Occupational Aspirations for Juniors & Seniors	138

CHAPTER I

INTRODUCTION

Each developmental stage has its own significance and each contributes to learning and acquiring knowledge and skills which are necessary for further stages. It cannot be said that vocational development begins at adolescence just because it is the stage in which one really can start to work legally. Rather, it is better to say that adolescence is the critical initial period of vocational development. From the status attainment point of view, high school years possess major importance for future socioeconomic achievement because high school academic achievement plays an important role in the connection between one's own family socioeconomic background and one's own occupational achievement (Featherman, 1980; Mortimer & Finch, 1986; Wilson, 1989).

According to Super (1967), adolescence, between ages 14 and 18, can be considered a crystallization period in which occupational plans are more realistic, less based on fantasy, and more based on one's own assessment of abilities, values, and interests. Children have been asked about their future goals, directly or indirectly related to their future jobs. Children's answers become more practical as they develop their self-concept with advanced thinking

capabilities. When children reach adolescence, they begin to narrow their choices about their future occupations. Also, occupational self-conceptions are developed around this stage.

In addition to the changes listed above, other changes are occurring in adolescence. Work area is one that is expanded. Around 70% of all high school seniors and about half of all high school sophomores participated in part-time work in 1980 (Lewin-Epstein, 1981). It was not common for a high school student to have had a part-time job in 1940; only 4% of males and 1% of females were part-time workers during high school (Steinberg, Greenberger, Garduque, & McAuliffe, 1982). Today, more high school students are working than ever before. Within less than half a century, the situation has dramatically changed. Work has become another important realm of an adolescent's daily life. Adolescent workers usually spend close to 15 hours per week when they are high school sophomores and about 20 hours in the senior class (Greenberger & Steinberg, 1986). Work experience changes and forms adolescents' work values and attitudes. Adolescents learn additional skills and knowledge from their work which cannot be learned in their school system or family.

When children reach adolescence, they become more independent and develop their own identity, escaping from their parents' influence. They also spend their free time

at the part-time job. It can be said that the actual amount of time adolescents spend with their parents may be reduced. However, it does not mean that the important role of family is fading. The family remains an extremely important influence on adolescent development, including vocational development. The family background is a discriminating factor for adolescents' occupational aspirations and further attainment. In addition, having a positive relationship with parents, especially through parents' support and encouragement, is another valuable factor which only family can contribute to adolescents' occupational development (Howell & Frese, 1982).

The aspirations of adolescents are of particular interest, because they play a direct role with respect to subsequent occupational attainment in the future (Haller & Porters, 1973; Howell & Frese, 1982). According to Marini (1978), estimates of the degree of congruence between high school aspirations and subsequent occupational attainments range from about 50% to 80% in studies done six months after students' high school graduation to about 50% in a study of women done five years after they completed high school. For men the congruence between aspiration and attainment was 15% and 25% in studies of men done ten years after they completed high school.

There were gender differences in adolescents' career aspirations (Schulenberg, Goldstein, & Vondracek, 1991).

Also, Marini and Greenberger (1978) found that the ranges of boys' and girls' occupational aspirations were considerably different. The occupational aspirations of boys were found to be slightly higher in prestige than those of girls were. This sex difference is in keeping with the greater importance of occupational attainment to fulfillment of the traditional male role as provider and life-long member of the work force.

The factors affecting aspirations, however, may be complex. For boys, a positive relationship has been found between socioeconomic status and occupational aspirations; among girls, there was a positive but weaker relationship between socioeconomic status and occupational plans (Banducci, 1967). Marini and Greenberger (1978) compared the total effect of socioeconomic background with the total effect of academic achievement on occupational aspiration and expecation. They found that socioeconomic background has the greater effect both on occupational aspirations and expectations for both sexes. Father's education bears a stronger relationship to aspiration than does mother's education; and father's occupational prestige bears a stronger relationship to aspiration than does mother's occupational prestige. Mother's occupational prestige bears a considerably smaller relationship to aspiration than do the other three indicators: father's education, occupational prestige, and mother's occupational prestige. Socioeconomic

background has a stronger direct effect on occupational aspirations and expectations for boys than for girls.

When the relative effect of socioeconomic background and academic ability on the level of occupational aspirations was examined, academic ability was found to have a stronger effect than socioeconomic background did for boys and girls (Sewell & Hauser, 1975; Hout & Morgan, 1975). Marini and Greenberger (1978) also found that academic achievement has a strong effect on occupational ambition.

Academic achievement and family socioeconomic background have traditionally influenced occupational aspirations and attainment, but it is important to examine the work-related attitudes emerging among young people. Such attitudes capture their approach to the world of work. Steinberg, Greenberger, and their associates (1981) have examined the influence of work attitudes on the adolescent vocational process. The authors indicated that workers expressed more negative attitudes about work and increasing acceptance of unethical practices in the workplace. Gender differences appeared in some attitudes. Girls gained self-reliance with more time in the workplace, whereas boys declined. Conversely, working was associated with more materialism among boys, but not among girls. Werner (1989) found that the occupational deviance, cynicism, and lack of social responsibility, noted by others in both cross-sectional and short-term longitudinal studies of adolescent

workers, may be attributable, in part, to a selection process that was already operating before the adolescents joined the work force.

Purpose of the Study

The purpose of this secondary data analysis of aspirations of a large rural sample of high school students was to develop a model of prediction of occupational aspirations which can be used by professionals who work with high school students and their parents. A theoretical model was developed and tested through the use of a path analysis procedure. The major theoretical factors seemed to be parents' education and occupation, gender, academic achievement, work attitudes, and working hours. In order to show how the model for the present research was derived from theory, the researcher presents three theories in this chapter. The two models which preceded the model developed here come from status attainment theory. Developmental theory is included because the subjects in this study are in high school. Social learning theory is included because these students' occupational aspirations are influenced by school and parents.

Theories Underlying Occupational Aspirations

The impact of family background and work experience on adolescents' aspirations is examined from the three main theoretical perspectives: status attainment theory, developmental theory and social learning theory. First,

status attainment theory provides a basic framework about how family background influences an individual's occupational attainment through occupational aspiration. Then developmental theory adds the importance of the stage wherein adolescents obtain their occupational development. Finally, social learning theory especially focuses on the socialization process and sheds light on the area of adolescents' part-time work experience.

Status Attainment Theory

A status attainment theory shows why certain careers appeal to some individuals, but not to others. Haller and Portes (1973) claimed that the place of status attainment research lies in the effort to specify the causal sequence through which individuals reach their positions in status hierarchies.

Status attainment theory can be used to identify basic factors which describe persons and their situations to account for whatever status locations they eventually hold. Knowledge of these causal inputs may allow prediction of eventual status outcomes for different individuals. A study of individual attainment must include the changing structure of status systems within which these processes take place. Two such models exist today. One is the "Blau-Duncan model" and the other is the "Wisconsin model." These two models are not the only ones developed, but they are representative of the two main orientations. Both are based on large data

sets and both have employed path analysis.

Best known of the two causal theories of status attainment is Blau and Duncan's (1967) model. It is based on data from a cross-sectional sample of American adult males as part of "Current Population Survey" of March, 1962, conducted by the Bureau of Census. The major concern of the model is the extent to which ascribed positions relate to subsequent attainment. As such, Blau and Duncan's model essentially focuses upon (a) the extent to which inherited status determines the social fate of individuals, and (b) the extent to which earlier positions in status hierarchies affect later levels of attainment (see Figure 1).

Basically, Blau and Duncan's status attainment model says that although parental positions have direct effects, their primary influence on the child's occupational attainment is indirect through the parents' educational levels. The child's education affects both early and late occupational attainment. The major contribution of the model consists of systematizing causal relationships.

The basic features of the second model of status attainment were developed by a group of researchers originally affiliated with the University of Wisconsin. The data set was collected by Little and Sewell from a one-third random sample of Wisconsin's male high school seniors in 1957 (Little, 1957).

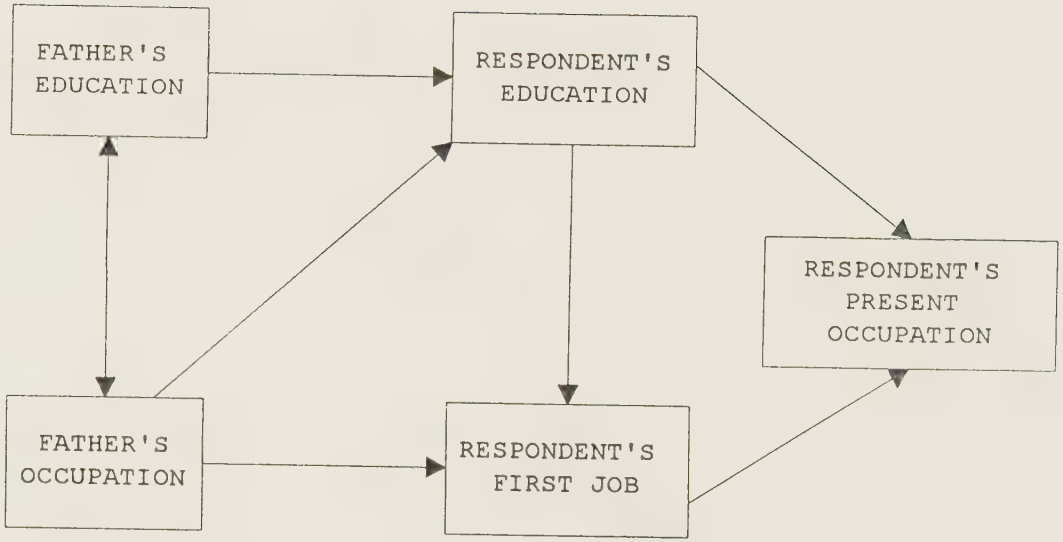


Figure 1. Blau-Duncan's Model of Status Attainment

The Wisconsin model was first used to describe data on the subsample of farm residents. Subsequently it was applied to respondents in five different residential areas (farm, village, small city, medium city, and large city) in order to ascertain whether original results were specific to the farm population. The model is parsimonious, involving 13 paths among variables arranged in the causal order (see Figure 2).

The same conclusions were drawn regarding the causal order of comparable status variables. Early occupational attainment is defined as primarily a function of prior education. Educational and occupational attainment are seen as causally dependent on parental status. The Wisconsin model attempts to complement the general status attainment model by a series of hypotheses specifying mediating variables and paths through which initial status variables influence or alter the ones as shown in Figure 2. Significant direct effects of parental status on educational and occupational attainments are found to disappear when intervening factors are considered. Indirect parental status effects occur primarily through significant others' influences as the latter affects the formation of status aspirations and acts directly on educational attainment. Since Blau and Duncan (1967) saw occupational attainment as the primary status marker, their "status attainment" is seen as virtually the same as "occupational attainment."

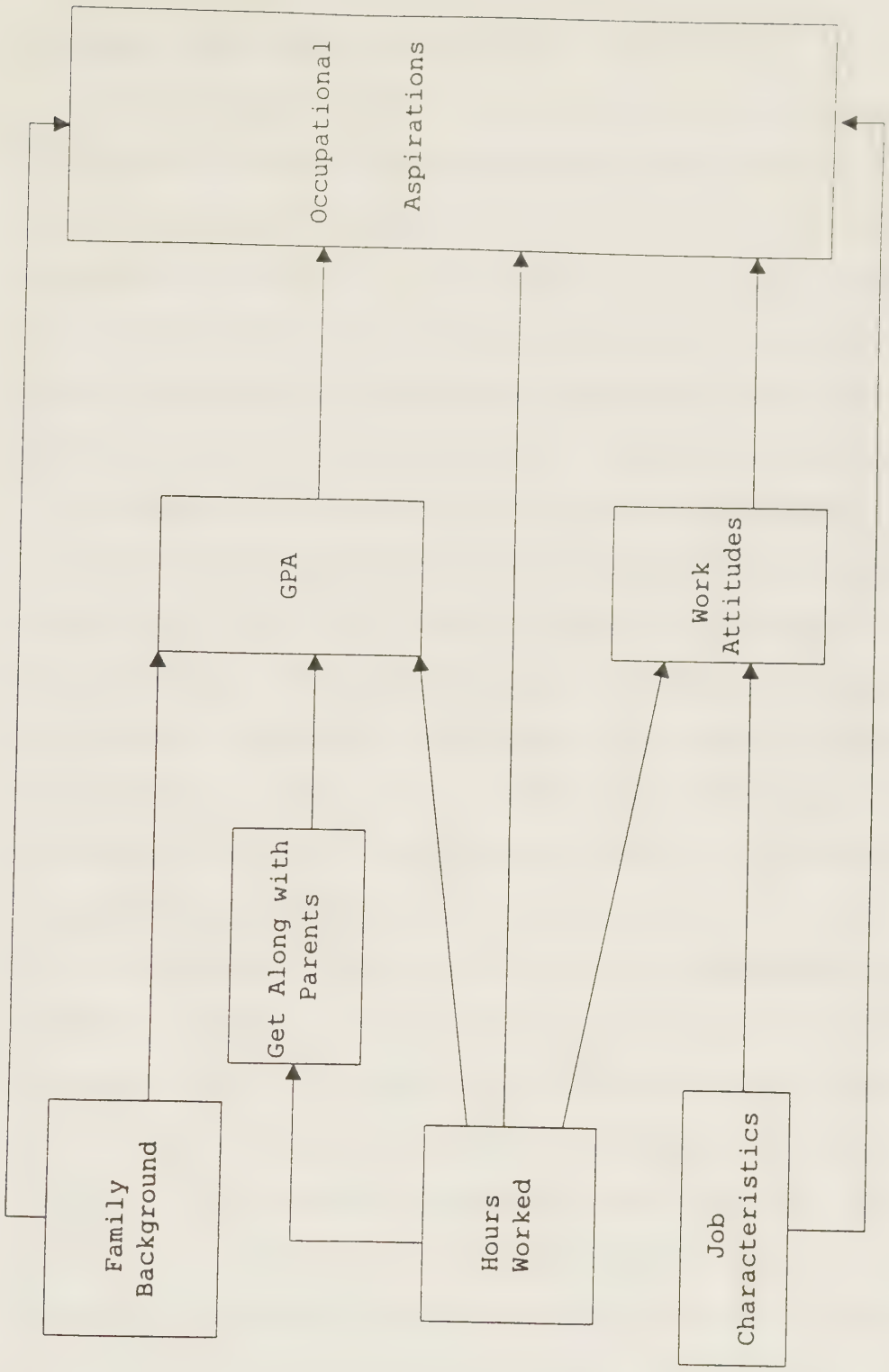


Figure 3. A Path Model of Adolescent Occupational Aspirations

Furthermore, their "status aspiration" is seen in the present research as "occupational aspiration."

The Wisconsin model shows that practically all the effect that family's socioeconomic status has on a person's educational and occupational attainment is due to its impact on the types of attainment-related personal influences that the person receives in his adolescence. The measure of significant others' influence employed on the Wisconsin sample suggests that this impact includes direct parental influence on the formation of status aspirations.

Concern of Wisconsin researchers with the dynamics of status attainment led them to describe parental socioeconomic status as a single exogenous variable formed by father's occupation and education, mother's education, and family's income level. This operational definition is different from Blau and Duncan's use of only father's occupation and education.

More closely aligned with the proposed model in the present research, the Wisconsin model clarifies the process by which status aspirations are formed and the manner in which they influence subsequent attainment-oriented behavior. Two general hypotheses were advanced by the Wisconsin researchers: a) status aspirations are complex forms of attitudes affected by the context in which individuals attempt to enact them. Occupational aspirations are essentially attitudinal variables describing differences

in personal goal levels. Aspirations are complex forms of attitudes because they are orientations to objects treated as having finely structured alternatives for behavior; b) attitudes, including levels of aspiration, are formed and altered through two basic mechanisms of interpersonal influence - reflexive adjustment of others' expectations and self-reflection.

Interpersonal influence in social psychology is supported empirically by strong direct paths from significant others' influence to status aspirations. However, significant others' expectations are not completely independent of evidence of the individual's capabilities. Significant others may take some of their cues as to what is appropriate for the youth by assessing his academic performance. This process is what is meant by a "reflexive adjustment of significant others' expectations."

The impact of self-reflection on development of status aspirations is seen by the strong direct paths from academic performance to educational and occupational aspirations, which are not eliminated by controlling for significant others' influence. This fact indicates that high school students are not merely responsive to expectations of significant others, but also are capable of assessing their own potentials. School grades reflect on the self by providing direct feedback on intellectual abilities and chances for high educational and subsequent occupational

attainment.

Developmental Theory

A developmental theory is one of the dominant theoretical viewpoints in the study of the development of occupational plans, because career development is one feature of a person's development. Several developmental theorists have suggested occupational plans based on developmental stages.

The sociological classification of all life stages by Miller and Form (1951) is work-centered although they were concerned also with security. They distinguish first the Prepatory Work Period, in which the child begins to develop an orientation to the world of work through home, neighborhood, and school activities. Then comes the Initial Work Period, beginning with the adolescent's first part-time or summer work experience at about the age of 14, wherein the adolescent is introduced directly to the world of work as a part-time or marginal participant. The Trial Work Period follows, beginning with the youth's entry into the regular labor market some time between age sixteen and age twenty-five and continuing until a stable work position is located. Three work stages go beyond the early stages.

According to Super (1957), between ages 14 and 18 individuals first begin to crystallize a vocational preference. During this period of crystallization, individuals begin to formulate ideas about appropriate work.

Although adolescents may not settle on a particular career at this point, they do begin to narrow their choices according to their interests, values, and abilities. In addition, adolescence is classified as a period of exploration by Super (1957). It is a period in which boys and girls explore the society in which they live, the subculture into which they are about to move, the roles they may be called upon to play, and the opportunities to play roles which are compatible with their personalities, interests, and aptitudes.

Adolescent exploration is not so much a process of developing a new picture of one's self as of putting it into words, developing a basis for finding out what sort of outlets there are in society for a person who seeks to assume a given kind of role, and then making modifications in the self-concept to bring it into line with reality. Adolescent exploration, then, may be viewed as a process of ascertaining and testing reality. Super (1953) maintained that part-time work has important exploratory values. According to him, part-time work experience provides youth with an opportunity to develop mature work habits such as regularity, punctuality, responsibility, and meeting deadlines. Also, it provides opportunity to mix with adults more or less as an equal and to become oriented to the adult subculture into which the adolescent is about to move.

Gottfredson (1981) suggested that one's self-concept at different stages of cognitive development is incorporated into major vocational development. The formation of self-concept and occupational preferences begins in early childhood. Four stages of developmental orientation are proposed: size and power, sex roles, social valuation, and the internal, unique self. These stages have been adapted from Van den Daele's (1968) description of cognitive development and the formation of children's ego-ideals.

According to Van den Daele (1968), by adolescence most youngsters take their broad social identity for granted. They have also found sets of adult social roles that they, their parents, and their friends deem acceptable. Some acceptable occupational alternatives have been established. Van den Daele (1968) concluded that in the fourth stage of development youngsters shift from accommodating directly to external socially defined goals to pursuing seemingly self-defined goals. The self may be seen either as an agent fulfilling social responsibilities that the person has internalized or as an agent fulfilling one's unique values, beliefs, and preferences. In this stage youngsters have also begun to develop more complex and integrated views of themselves and reality.

The concerns and developmental changes revealed by the studies of self-concept and person perception are reflected in vocational aspirations during this stage. One's

abilities, interest, and life plans do limit what one will be able to do, but these factors often seem to be self-imposed and to affect plans largely before youngsters encounter the job market. It is widely assumed that people differ in their perceptions of opportunity and that these perceptions affect vocational behavior (Gottfredson & Becker, 1981).

The developmental approach based on those assumptions has important implications regarding a) the plasticity of individual development (the idea that changes at one level are reciprocally dependent on changes at other levels suggests that there is always some possibility for altering the status of a variable or process at any given level of analysis); b) the capacity of individuals to play an active part in their own development (it is possible to view any level of analysis as an influence on the other levels of analysis that influence it. By influencing the context that influences him or her, the person provides feedback to himself or herself.); and c) the potential for intervention across the life-span (Vondracek et al., 1986).

From the perspective of developmental theory, the development of a vocational role--the progression of a career--should be conceptualized as one feature of a person's development. As such it must be understood that vocational development both influences and is influenced by his or her cognitive, personality, physical, and social

developments. In addition, the ways in which a person's changing context--family, school, friends, community, and culture, for instance influence and are influenced by these individual developments must be understood as well.

Vocational development does not begin at adolescence. According to Schulenberg, Vondracek, and Crouter (1984), the stage of adolescence plays an important role for developing adolescents' future occupation. First, adolescents are able to begin to have part-time jobs which foster their orientation toward future jobs. In addition, developmentally, their status in the society is no longer a dependent one. Thus their thoughts about future jobs are more practical and subjective.

Social Learning Theory

Why do people happen to enter the particular occupations they do? How can it be explained that adolescents express different preferences for various occupational aspirations? Social learning theory attempts to explain how occupational preferences are acquired based on their socialization processes. Socialization is defined as "the process by which individuals acquire the knowledge, skills, and dispositions that enable them to participate as more or less effective members of groups and the society" (Brim, 1966, p.3). A crucial part of the socialization process is the task of preparing a young person for adult economic responsibilities, and employment experience is

perceived as significantly impacting the occupational development of adolescents. For ongoing socialization process, the elements such as genetic factors, environmental conditions, learning experiences, cognitive and emotional responses, and performance skills and the interactions among those elements are consequential impacts to produce movement along one career path or another (Krumboltz, 1981).

As a basic environmental factor, the family influences an individual's occupational socialization process. Families differ in what they teach their youngsters and in the resources they have available to provide for them through a certain religion, values, and expectations (Krumboltz, 1981). Mortimer and London (1984) also agree that the family socializes each new generation of workers, instilling the most basic attitudes and values concerning the meaning of work, which influence vocational preferences and eventual occupational destinations. Such differences produce conditions for the individual that may make a difference in an individual's occupational preferences, skills, and selections. In addition, the family provides models which the individual has observed for occupational socialization. An individual is more likely to express a preference for a course of study, an occupation, or the tasks and consequences of a field of work if that individual has been consistently positively reinforced by a valued person who models engaging in activities associated with the

successful performance of an occupation or field of work. Many empirical studies showed that an individual's family background is a direct influence on their future occupational attainment. Such examples suggested how the family works for their offsprings' future occupational socialization.

The occupational socialization of American youth occurs in other contexts such as the peer group and the school. Hamilton and Stewart (1980), pointing out the limited role of school, suggested that schools provide a limited range of experiences for adolescents in which the tasks are academic, adults are in control, and the work is individually oriented, rather than an interdependent group effort. Although arguing that high schools do not provide opportunities for young people to develop autonomy, initiative, or self-reliance, several reports on the state of adolescence (Carnegie Commission on Policy Studies in Higher Education, 1980; National Commission on Youth, 1980; National Panel on High School and Adolescent Education; 1976; President's Science Advisory Committee, 1973) suggested that a part-time job teaches the adolescent important lessons about dependability, punctuality, and self-management and encourages the development of personal responsibility taking. In addition, Hamiton and Stewart (1980) claimed that an effective work program may expose youth to opportunities for cooperation and decision making,

may improve skills, may expose youth to authoritative leaders that are good teachers and have warm relationships with employees, and may insert relevance to academic progress.

There are two schools of thought about how work experience may affect occupational socilization. In the first, the occupational competence model (National Commission on Youth, 1980; President's Science Advisory Committee, 1974), work is believed to be an important contributor to the educational, developmental, and socialization processes, preparing youth for adulthood. Supporters of this model argue that work experience enables students to acquire values, habits, skills, knowledge, and attitudes that make them more competent, realistic, and employable. In addition, they claimed that adolescents who work should develop more accurate knowledge of the educational requirements of the jobs to which they aspire.

Other researchers question the occupational competence model and suggest a second school of thought, the occupational deviance model. In this school, it is argued that in this society work available to adolescents is menial, alienating, and dehumanizing. Such a job condition contributes to lower educational achievement, a negative attitude toward work and deviant behaviors (Behn, Carnoy, Carter, Crain, & Levin, 1974; Greenberger & Steinberg, 1981).

In addition to the above two models, impact of early work experience on occupational development can be viewed from another perspective that early work experience has virtually no effects on the young person's work attitudes, values, habits, and plans (Steinberg, Greenberger, Vaux, & Ruggiero, 1981). Based on an empirical research (Steinberg & Greenberger, 1980), Steinberg and others maintained that there was a separation between adolescents' part-time jobs and jobs in which they expect to participate in the future. Rather, factors such as sex and social class have far more important impacts on further occupational development than do part-time jobs.

For example, feminist theorists suggested that gender differences should be reexamined because gender contributes in a lifelong process to situated behavior that both reflects and reproduces a structure of differentiation and control and in a process of categorization and stratification (Ferree, 1990). In both the family and the larger society, the patterns of work are both evidence of the gendering process and clues as to whether stratification by sex is increasing or declining. The assignment of household chores, the types of early adolescent employment, parental support for achievement academically and occupationally, anddifferential rewards received for such achievements are components of a socialization process which may be liberating or confining to individuals.

Model of Occupational Aspirations

A model of occupational aspirations for adolescents would be expected to have family background factors as exogenous variables and to have aspirations as the dependent variable. A review of the literature revealed that intervening variables would include academic achievement (GPA), hours of working, school commitment, a job characteristic, different parental treatment after beginning work, parent-child relationship after working, grade change after working, and work attitudes. The ordering of these variables was based on the literature review, the data available, and some preliminary analyses. The operational definitions of these variables are given in full in the methods chapter when the instruments are fully described. The preliminary model is presented below (see Figure 3).

The placement of the variables was based on theories of status attainment, developmental, and social learning, all of which were described above. Briefly, status attainment theory would predict that the parents' educational and occupational attainment would directly influence their child's occupational achievement. Since there are no data on eventual occupational achievement, the model uses occupational aspiration which is highly related to achievement. Social learning theory would explain that family background influences aspirations by shaping work values and attitudes. In addition, social learning theory

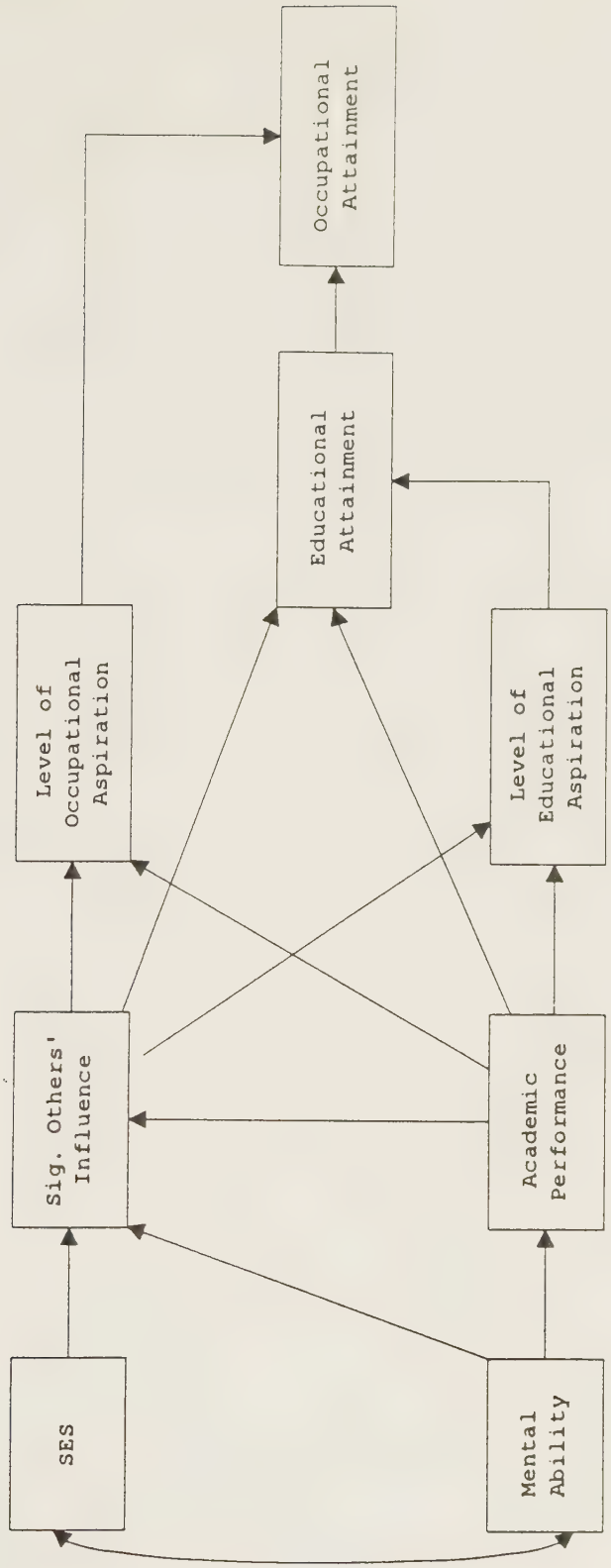


Figure 2. The Wisconsin Model of Educational and Early Occupational Attainment

explains the role of part-time experience which provides environmental contexts to develop occupational preferences and further goals. Social learning theory would also predict a gender difference. Developmental theory adds the influence of age differences. Gender and age were not in the model, but the model was analyzed between males and females and between the first two years and the last two years of high school. The path analytic statistical technique was used to test the model.

CHAPTER II

REVIEW OF THE LITERATURE

The occupational aspirations of adolescents are of special concern, because they play an important role with respect to subsequent occupational attainment. Although the study of anticipated and desired outcomes must be distinguished from the study of the outcomes themselves, evidence suggests that the aspirations expressed by high school students are at least moderately predictive of adult behavior (Marini, 1978). Marini also claimed that follow-up studies at various intervals after high school graduation indicate that career choices in adolescence definitely play a role in the determination of subsequent occupational attainment.

The most readily interpretable estimates of the overall relationship between the level of occupational aspiration and subsequent occupational attainment are the correlations reported by Sewell and Hauser (1975) and Carter (1972) between the level of occupational aspirations of high school seniors in Wisconsin in 1957 and the level of their occupational attainments seven years later. The correlations reported are .48 for men, .52 for unmarried women, and .43 for married women who were in the labor force (Carter, 1972).

Regardless of the degree of association between occupational goals and attainments, all studies indicate that the occupational aspirations of nigh school students play at least a directional role with respect to subsequent occupational attainment. Even in studies which find a relatively low degree of congruence between aspirations and attainment, the highest proportion of individuals who end up in a given occupational category come from those who initially desired to enter it. Longitudinal studies of adult women further indicate that occupational aspirations in high school are related to actual career choice (Marini, 1978).

Factors believed to influence levels of adolescent aspiration are reviewed, including family socioeconomic background, academic performance, work experience, work values and attitudes, gender, and culture.

Family Background

As the major socializing institution in American society, the family plays an important role in directing the aspirations of youth. Especially, the socioeconomic status of the family would be the strongest predictor for an individual's occupational aspiration among other family related variables such as structure of the family and types of family. A positive association was found between family background and the level of adolescents' occupational aspirations (Caro, 1965; Haller & Portes, 1973; Hannah &

Kahn, 1989; Harvey and Kerin, 1978; Marini & Greenberger, 1978; Otto, Haller, Meire, & Ohlendorf, 1974; Sewell, Haller, & Straus, 1957).

For example, Marini and Greenberger (1978) found that socioeconomic background remained a strong influence on the occupational aspirations and expectations of adolescents: it had a stronger direct effect on occupational ambition for boys than for girls; however, it had a stronger effect on academic achievement for girls than for boys. The indirect effect of socioeconomic background on occupational ambition via academic achievement could be assumed to be almost as large for boys as it was for girls because of the greater effect of academic achievement on occupational ambition for boys than for girls. This type of result could be explained by the social system context that places a higher value on occupational accomplishment for males than for females. Therefore, the relationship between the availability of resources and occupational aspiration is weaker for girls than for boys since the differential reward structure for the two sexes provided less incentive for girls to carry their resources into occupational accomplishment. The evidence was provided from the outcome that girls from high socioeconomic backgrounds and girls with high levels of academic achievement were both less likely than boys were to attempt to reach high occupational goals.

In a review of the literature, Marini (1978) concluded that the positive correlation between socioeconomic background and the prestige level of job choices is supported for males, but not for females. She suggested that the gender difference occurs in the relationship between SES and job prestige because females have not sought status and income through paid employment. Consequently, females have not drawn on family resources to advance their employment opportunities in the same way as males have. Marini speculated that with changes in attitudes towards women's employment, more girls might value high-prestige occupations, and SES background could become a stronger variable in female job choices.

Gottfredson (1981) offered an explanation for the weak correlation between SES and occupational prestige for females. Because female-dominated occupations tend to cluster around a moderate level of prestige, few female-dominated occupations reach the same high or low prestige scores as male-dominated occupations do. Female-dominated occupations lack the dispersion of prestige scores; therefore, possible SES differences are difficult to detect. It is suggested, then, that using discrete prestige levels rather than continuous scores might reveal SES differences among females.

A possible explanation as to why family background plays an important role for occupational aspiration is

described as being focused on the relationship between degrees of available opportunities and family background. As Blau and Duncan (1967) explained, father's occupation, a major component of family socioeconomic background, directly and positively influenced son's education, which later influenced son's occupational attainment. This influence occurs because structural locations in socioeconomic status circumscribe the amount of goods and services (Howell & Frese, 1982).

Kerckhoff (1972) maintained that the family background is important because it constituted an important reference point for children's location in the social structure based on expectations of future life events, states, and achievements. Adolescents from lower socioeconomic status families tended to choose prospective jobs that required less education and were lower in status than did adolescents from higher-socioeconomic background, mainly because of different parental expectations for their adolescent children's career choices (Sinclair, Brouch, & Miller, 1977).

Gottfredson (1981) developed a model of occupational choice which addresses socioeconomic background. According to her model, children in the adolescent stage became aware of social class differences and further their occupational choices to prestige levels equivalent to or below their own socioeconomic background. By the time adolescents are ready

to make job choices, they have been strongly influenced by social norms on class. Possible choices of males and low SES females conform to Gottfredson's model, and it is the choices of high SES females which do not conform (Hannah & Kahn, 1989).

The attainments of same sex parents had a greater impact on adolescent status expectations than did those of the opposite sex. Mother's occupational status had a greater total effect on female's work orientation, whereas father's occupation had a greater effect on the male's occupational expectation (Rosen & Aneshensel, 1978). Daughters of employed mothers had a more intimate model on which to base their assessment of the value of employment and saw employment as more rewarding than did their counterparts (Leslie, 1986).

Shapiro and Crowley (1982) suggested that parental educational attainment is a broad measure of socioeconomic background which is related to the occupational status aspirations of both female and male adolescents. They said that higher parental educational attainment was likely to be associated with greater family resources, facilitating acquisition of the education and training necessary for higher status occupation. In addition, more highly educated parents were likely to be role models for attaining higher status occupations. However, the impact of parental education was smaller among females and among older youth

than among others. The research implied that the role model effects of family background weaken as young people grow and develop. On the contrary, Betz and Fitzgerald (1987) proposed that parental education may be more useful than socioeconomic status is to predict female choices.

The mother may serve as a role model for her daughter's educational and occupational aspirations. Banducci (1967) found that at all socioeconomic levels high school seniors with working mothers reported greater expectations for a lifetime of work than did girls with nonworking mothers. However, Marini (1972, 1974) found no effect of mother's employment status on educational aspirations or expectations for high school students of either sex.

The association between mother's education and children's outcomes could be that the mother's education was related to children's abilities (Leibowitz, 1977). Leibowitz (1974) found that mother's education was positively related to the amount of time inputs with the children. Although mother's working outside home reduced time spent with children, it was not significantly different compared with that of the nonworking mothers (Leibowitz, 1977).

Academic Performance

A positive relationship between academic performance, usually indexed as grade point average, and occupational aspiration has been observed. Whether or not adolescents

see ability as a factor affecting their access to desired occupations was examined with social class held constant (Caro & Pihlblad, 1965). It appeared that high academic achievement tended to encourage confidence in a high occupational orientation, since those students with high aptitude ratings indicated that they aspired to more prestigious occupations than did those with medium and low aptitude ratings. However, students with medium and low aptitude ratings retained a high occupational goal orientation even though they perceived academic weakness was a potential barrier to realization of objectives. Later these students revised occupational aspirations downward to a point where academic deficiencies seemed less relevant. Thus, academic aptitude was considered as an important factor mediating social class differences in occupational orientations. The study showed that students perceived their academic ability as a factor affecting their access at least to high prestige occupations.

Examining the effects of academic performance on occupational aspirations, Marini and Greenberger (1978) found that academic performance had a greater effect than it did in previous studies. It was also found that academic achievement had a stronger effect on occupational aspiration for boys than for girls, since boys' occupational goals were more directly tied than those of girls to the availability of academic achievement (Rosen & Aneshensel, 1978).

Academic performance was treated as an intervening variable between family background and their future occupational expectation. Family background variables including father's and mother's education, family socioeconomic status, and family size had greater effects for females, whereas academic performance had substantially lesser effects for females than for males. Contrary to this, Hout and Morgan (1975) found the effect of school grades on occupational expectations to be greater for white females than for white males, but greater for black males than for black females. When occupational aspirations were examined not by the prestigious score, but by the areas of careers, analysis of grade achievement revealed that pioneers who chose traditionally sex role defined areas of occupations earned higher grade point averages than did nonpioneers (Rezler, 1967; Sandberg, et al., 1987).

Howell and Frese (1982) explained the role of academic performance on occupational aspiration in the context of the self-reflexion process, which is defined as the conscious consideration by students of their own ability and prior performance on school tasks. Other empirical studies supported that student's academic performance was an important influence on the developing self-concept, which may foster further occupational achievement (Mortimer & Finch, 1986; Reitzes & Mutran, 1980). Academic performance plays an indirect but critical role in influencing students'

occupational aspiration. Parental role as an encourager for their offspring's further occupational attainment was emphasized in Wisconsin model. Academic performance provided the criterion for how much parents encourage such performance.

Work Experience

If early work experience does have an impact on the development of the adolescent, it would broadly be summarized under two important characteristics of work, such as the amount of time adolescents spend in the work setting and what the job actually does provide to the adolescents. As Steinberg and Greenberger (1980) mentioned, the effects of working are not mainly dependent on whether or not the adolescents are working, but rather on the characteristics of the adolescents' work and on the amount of time they spend on work. Many studies which examined how early work experience influenced occupational expectations, academic ability, work attitudes, and family relationships are reviewed below.

Hours of Working

It was reported more than 40 years ago that working long hours is associated with lower grades in school (Bateman, 1950). Considerable commitments of time and energy to a job are likely to weaken a student's emotional contribution to school, and to lower academic achievement. However, 20 years later Hammond (1971) failed to show any

evidence that grades were meaningfully different between the employed and unemployed students during the junior and senior years. In a similar context, when Bucknam (1976) compared the experiental group to control groups of students, there were no academic losses as measured by standardized tests. Other studies (Mangum & Walsh, 1977; Straus & Holmberger, 1968) also supported the finding that part-time work experience is not related to academic achievement when the effects of social class are controlled.

From a cross-sectional study, Steinberg, Greenberger, Garduque, Ruggerio, and Vaux (1982) questioned how spending time in the work place impacts on school involvement including time spent on homework, time spent on extracurricular activities, school enjoyment, and school absence. Three of these variables have a negative association with time spent working. Time spent in the work place was related to a drop in time spent on homework and extracurricular involvement and a decline in school enjoyment; however, working does not appear to affect school absence. Moreover, working does not affect school performance as indexed by grade point average.

Using the same data set of students who had experienced part-time work, Steinberg, Greenberger, Garduque, and McAuliffe (1982) examined the relationship between academic achievement and work status (work or not). Work status was not significantly related to the academic achievement when

the effects of the demographic variables such as grade, sex, ethnicity and social class were controlled. Weekly hours of employment did add significantly to the prediction of students' academic achievement. Therefore, the authors drew the conclusion that how much an individual works is a more important predictor of academic achievement than whether the student works.

The variable of school involvement is an important one to examine along with the number of hours of working and academic achievement. When the employed students' participation in extracurricular activity was compared with the activity level of the unemployed, Hammond (1971) found that there was a significant difference in the amount of extracurricular activities. The employed students reported a higher number of activities. Therefore, school involvement would be considered an important mediating variable for the relationship between hours of work and school achievement (Steinberg et al., 1982). The proportion of explained variance in academic achievement was from 6 percent to 33 percent when the school involvement variables were added after demographic variables. It indicated that students who devote time to their homework are seldom absent, enjoy school, participate in extracurricular activities, and have higher academic achievement than do their less-involved peers. When the effect of school involvement was controlled, the relationship between work

and academic achievement was no longer significant. Working appeared to lead to lower school involvement because of more frequent school absences and to decreased enjoyment of school. Low school involvement was also associated with poorer academic achievement.

From a study to examine the interaction between grade level and weekly hours of working, Steinberg et al. (1982) concluded that 10th graders can sustain fewer hours of weekly employment than can 11th graders. For example, 10th graders' academic achievement decreased at the point when they worked more than 14 hours. For 11th graders, the decrease occurred when they worked more than 19 hours per week. Therefore, Steinberg (1982) advised that a high school sophomore can work up to 15 hours a week and a high school junior up to 20 hours weekly without suffering ill effects.

In contrast to Steinberg et al.'s (1982a, 1982b) studies which showed that employment during the school year may interfere with normal educational progress including extracurricular activities, Hotchkiss (1986) examined the effects of time spent at work on school activities. Surprisingly the finding was that number of hours of work had no effect on any of the school variables including days absent from school, days tardy to school, or number of extracurricular activities. In addition, the author reported that grades taken from the students' transcripts

and self-reported items that reflect ability as a student were affected by hours of work at all.

One study reported that employed students can be seen to have higher academic achievement than do unemployed students (Schill, McCartin, & Meyer, 1985). It was found that there was a curvilinear relationships between hours worked and academic achievement; that is, the students who work less than 20 hours have a higher average of academic achievement than do those working more than 20 hours and those unemployed. Schill et al. (1985) interpreted the outcome as the students who work already have an advantage over nonworkers in access to successful adult role models and academic ability.

Similarly, two studies (Bowles & Gintis, 1976; D'Amico, 1984) have suggested that employment and academic achievement may be complementary. This finding may be explained by a previous empirical study in which students' academic achievement were modestly correlated with traits such as perseverance, dependability, and consistency which were fostered through the early employment experience (Bowles & Gintis, 1976). Basing their finding on reasoning that the school system is designed to instill the above traits as desirable attributes in work place, Bowles and Gintis claimed that employment and school may have mutually reinforcing effects on students. They also pointed out that high school employment may actually foster behaviors or

traits in students that promote academic success.

As Bowles and Gintis' (1976) model suggested, D'Amico (1984) provided evidence that employment at either intensity level has no adverse consequences for class rank, and, in fact, high school employment may actually foster grade achievement. From their study, very intensive work involvement posed some time constraints for some groups, but less intensive work involvement showed almost no constraints on both study and free time activities.

There was one report about the impact of duration of employment (Mortimer & Finch, 1986). It was found that working more than one year during high school is associated with decrements in the earlier academic achievement and academic self-concept. Those students who were not employed in high school had higher academic achievement than did those who worked two or three years. Working only one year was not associated with a significant decline in academic achievement. Also, the additional evidence that there was a negative effect of 10th grade working hours on 11th grade academic achievement may still be important for those students who begin work very early in their high school years.

It cannot be overly generalized from the above empirical studies that intensive work involvement depresses academic achievement. Also, although hours of working affects academic achievement, there might be mediating

variables to intervene the reltaionship between the number of hours of working and academic achievement, such as extracurricular activities, enjoyment of school, and absence from school. How long the students work and when they start to work would provide valuable information about the relationship between working and academic achievement.

Job Characteristics

Different kinds of jobs may have different kinds of effects and developmental consequences (Kohn & Schooler, 1973; Steinberg & Greenberger, 1980). Early work experience may affect adolescents' work attitudes and values, not by the work itself but through the job characteristics. Hamilton and Crouter (1980) suggested that researchers must look at the work place as a context for adolescent development.

It is reported that there are eight benefits of work or service experience for youth: sustained exposure to a particular career; developing adult work attitudes and habits; interacting with adults; learning responsible behavior; grasping of non-classroom skills and problem-solving techniques; developing citizenship skills and attitudes; increased academic motivation; and developing lifelong learning skills (Work-Education Consortium, 1978). From the study of adolescents during the Great Depression, Elder (1974) believed that work experience enhances independence and responsibility since employed adolescents

showed a much greater interest in adults and spent more time with them in school-related activities than other children did.

However, Steinberg and Greenberger (1980) questioned the positive ideas about work experience that holding a job will teach responsibility, engender positive attitudes toward working, and provide opportunities for the application of skills learned in school to real-world situations. They suggested that first-time experience in the part-time labor force during the high school years affects the development of certain work-related attitudes and personality traits as well as the acquisition of knowledge about the world of work, but it has little impact on long-range occupational reward values. Adolescents who work may develop positive attitudes about their own capabilities and values as workers. At the same time they also develop skeptical attitudes toward the work place, for several reasons: the work is relatively unpleasant, there is little to no opportunity for advancement, both employers and employees occasionally violate the law, and little intrinsically interesting learning occurs from the work performed (Steinberg, Greenberger, Vaux, & Ruggiero, 1981).

Based on several cross sectional studies of adolescents in the work place, Steinberg and others (1982b) agreed that working is associated with greater personal responsibility since workers report high levels of punctuality,

dependability, and self-reliance and work orientation. However, the researchers failed to find a relationship between working and social responsibility. There is little support for the assumption that working enhances adolescents' concern for others.

There were several limitations which prevent adolescents from gaining an advantage from working as initially intended. One of restrictions is related to the limited work place. Greenberger, Steinberg, and Ruggiero's study (1982) showed that the work of adolescents is repetitive; provides few opportunities for learning; and often exposes workers to environmental, personal, and interpersonal stressors. Adolescents may not be ready for the stresses and overloads that work poses for them, since they have not developed sufficient coping skills (Greenberger & Steinberg, 1986).

Consistent with the above analyses, the more time adolescents spend in the work place, the more they gain in work orientation, an index of an individual's ability to successfully complete tasks and to take pride in doing so. In addition, time in the work place was associated with gains for girls', but not for boys', self-reliance. However, there was little relationship between work and social responsibility (Steinberg et al., 1982b). The results of Steinberg and others' study was contradictory to the expected benefits of work. Instead youngsters who work

do not become more committed to the welfare of others or more tolerant of individual and cultural differences.

Greenberger and Steinberg's study (1981) challenged the idea that all jobs were equivalent in their activities, roles, and interpersonal relations. Jobs differ in the experiences that adolescents have for managing on their own, making decisions, experiencing themselves as an integral part of work groups, and meeting adults who serve as social supports. Those adolescents most likely to work without a boss or co-worker and to have to learn or exercise self-management were babysitters. In a rank order of the ability to make decisions on the job, babysitters were highest, and operatives and manual laborers were in the middle. In fact, operative and skilled workers were least likely (88%) to work without a co-worker or supervisor followed by food service workers (93%).

Along dimensions of social responsibility, the belief that one's work affects the well-being of a lot of other people shows differences among jobs (Greenberger & Steinberg, 1981). Adolescents in food service work and in manual labor felt most strongly that their work had an impact on the well-being of others. Cleaners and sales workers are the least likely to feel that their work had a meaningful impact on others. A majority of them experienced a moderate sense that their efforts were useful to the company. Those who work reported feeling better able to

help people when they were in the job setting than when they were in the school setting.

Although these negative findings of work experience were reported in several studies (Greenberger & Steinberg, 1981; Steinberg et al., 1981, 1982a, 1982b), Stern and others (1990) raised an important question about whether previous analyses of existing data sets have sufficient information about what students actually do on the job (Stern, Stone, Hopkins, & McMillion, 1990). They claimed that most previous studies have recorded only a few significant facts about students' jobs, such as the number of hours worked per week and no information about job characteristics that might affect whether the job is a positive or negative experience for students.

It was suggested by Hamilton and Crouter (1980) that the following variables would be most directly related to work experience: location; size; whether the job is "undermanned" or "overmanned"; the nature of the social system operating in the work place; and the nature and demands of the work whether routine or unpredictable, independent or closely supervised, skilled or unskilled, and predominantly manual, mental, or social.

Work and Family Relations

Although considerable empirical studies existed to prove the relationship between work and school, the effect of work on the family was rarely studied. It is intuitively

assumed that relationships with family members would not be same after adolescents became involved in the work. The main factor for changing their relationships with family members would be the limited time. School occupied most of their day time; only late afternoons, evenings, and weekends were available for working and family activities. Greenberger, Steinberg, Vaux, and McAuliffe (1980) found that adolescents who work spent less time in family activities than did their non-working peers. Workers also ate dinner with their family less often than nonworkers did.

Even though having a part-time job interrupted adolescents' convenient time to spend with their family members, work would help to change the quality of their relationships with parents. Steinberg and Greenberger (1980) suggested that working may affect the development of autonomy through its impact on family relationships. The authors said that having a part-time job could encourage adolescent students to pursue more autonomy and behave more independently at home because they were treated as a responsible person on the job. It was also mentioned that there is a possibility that adolescents may come to feel closer to their parents while they performed adultlike roles in their work (Greenberger, Steinberg, Vaux, and McAuliffe, 1980).

Through an empirical study, it was found that working did not seem to affect the quality of family relationships,

although working reduced the time spent with the family (Greenberger et al., 1980). Based on the results of the study, the researchers inferred that less time spent with parents can be viewed as part of a healthy move toward autonomy and maturity. Adolescents seem to be able to manage their relationships with the parents without depending on the time they spend with the parents.

At the same time, work may push parents to change the perception about their children who are working and capable of handling greater responsibility. Both changes from children's psychosocial maturity and parents' attitudes toward their children would be an important cause for developmentally different parent-child relationships. As Peters (1987) strongly suggested, it is an obvious shortcoming that few studies were done in the context of family relationships since family dynamics and family patterns are bound to change when the adolescent works.

Work Related Attitudes

Several scales have been developed to measure attitudes about work and work related areas for use with employed students. Three measurements-materialism, cynicism about work, and acceptance of unethical business practices-were developed in the California studies by Ruggiero and others (Ruggiero, 1984; Ruggiero, Greenberger, & Steinberg, 1982). Two other scales, work orientation and social commitment scales, were developed by Greenberger and associates

(Greenberger, Josselson, Knerr, & Knerr, 1975). Examining the impact of high school employment on work related attitudes of college students, Goslen (1989) concluded that work attitudes of college students in North Carolina were divided into six categories: social commitment, work orientation, reliance on self, intrinsic value of work, extrinsic value of work, and cynicism.

Using the data from the high school students in rural North Carolina, Clifford (1992) ran a factor analysis which yielded six scales: ethics and work, self-reliance, extrinsic rewards of work, responsibility, intrinsic rewards of work, and social acceptance. The results of Clifford's study were more similar in composition to the initial scales used by the California group with their urban high school sample than to those based on Goslen's college students. Since college students are both a more mature and more select group than are those in a high school sample, it was not surprising that there were differences.

Steinberg, Greenberger, Vaux, and Ruggiero (1981) indicated that work was associated with greater responsibility, including dependability, self-reliance, and work orientation, but not related to social responsibility. Workers expressed more negative attitudes about work and increasing acceptance of unethical practices in the work place. The impact of work on cynicism differed by SES. Gender differences appeared in some attitudes, as girls

gained self-reliance with more time in the work place, whereas boys declined. Conversely, working was associated with more materialism among boys, but not among girls.

Bachman, Bare, & Frankie (1986) also examined work attitudes of high school students. They asked questions about jobs that high school seniors were holding rather than using general work attitude measures. In contrast to the above studies, Clifford (1992) could not find any evidence to support the suggestion that work was related to negative or positive work attitudes. The above studies provided valuable information about the relationship between work and work attitudes among high school students; however, they left unquestioned areas. Whether the working does not provide important information for understanding the work attitudes of adolescents. With information about how long students work, where they work, and what kind of jobs or duties they hold, the relationship could be better understood. It could be the same in the case of work attitudes. Work itself may contribute to develop or change students' work attitudes. Even more so, their job characteristics or duties in their work could give more clues to draw a better picture about the influence of work on work attitudes.

Gender

Marini and Greenberger (1978) found that the ranges of boys' and girls' occupational aspirations were considerably

different. According to them, the occupational aspirations of boys were found to be slightly higher than those of girls. Other studies have also found that boys had slightly higher mean levels of occupational aspirations than girls (Harrison, 1969; Otto et al., 1974). On the contrary, others have found slightly higher mean levels of aspirations for girls than for boys (Farmer, 1983; Hout & Morgan, 1975; Olive, 1973; Shapiro & Crowley, 1982).

From a longitudinal study between 1970 and 1976, Garrison (1979) found that in 1970 the largest gender difference occurred among those adolescents choosing high status professions. In high status professions male percentages were almost 26 percentage points higher than female's. In the middle status professions the overrepresentation of females is very large; the percentage of females choosing these jobs exceeds the percentage of males by almost 21 points. Slightly smaller gender differences occur in the clerical-sales and skilled manual categories with females outnumbering males in the clerical-sales category and males surpassing females in the choice of skilled manual jobs.

When changes across cohorts were examined, the apparent stability of job choices over time is due to unbalanced trends in male and female distributions. Although the 1970 and 1976 distributions for the entire population are quite similar, separate comparisons of the 1970 and 1976

distributions for each gender revealed higher rates of change. For females there was a 10-point difference in job choices between 1970 and 1976 as compared to only eight points difference for males.

It is difficult to conclude that female adolescents held higher occupational aspirations than did males. Occupational aspirations, however, remained strongly sex stereotyped. When adolescents' aspirations are considered from sex-related occupational categories, boys' and girls' career choices rarely overlap. This trend is probably true because girls aspire to a small number of typically "feminine" occupations, such as teaching, secretarial work, nursing, and social work, whereas boys choose a wider variety of occupations, which tend to be professional or scientific (Marini & Greenberger, 1978).

According to Marini and Greenberger (1978), boys tended to desire and expect to enter male-dominated occupations, whereas girls tended to desire and expect to enter female-dominated occupations. The mean percentages of women employed in occupations aspired to and expected by girls are 67% and 75%, respectively. These percentages can be compared to the mean percentages of men employed in occupations aspired to and expected by boys, 83% and 82%, respectively. The sex difference is statistically significant. Thus, the occupations aspired to and expected by boys are, on the average, more highly sex-segregated than

those aspired to and expected by girls. In the case of occupational aspirations, this pattern in part reflects a greater tendency for girls than boys to make cross-sex occupational choices.

On the average, girls expected to enter occupations which were more highly female-dominated than those to which they aspired. Girls were more likely to shift their aspirations from male-dominated occupations to expectations in the female-dominated category of jobs than boys were to shift their aspirations from the female-dominated category to expectations for male-dominated jobs. Girls, therefore, seemed to perceive the male-dominated jobs to which they aspired as less accessible than boys perceived the female-dominated jobs to which they aspired.

In the same context, Rosen and Aneshensel (1978) found that both males and females tend to have sex-typical occupational expectations. Responses of male adolescents tended to concentrate in the stereotypically masculine categories of executive profession (66%) and skilled manual (87%). Responses of female adolescents tended to concentrate in the stereotypically feminine categories of lesser professionals (75%) and clerical/secretarial (79%).

Proportionately, the number of girls who think they will fill stereotypically feminine occupations increased with age, whereas the percentage who expect to end up in masculine jobs declined. In contrast, the percentage of

males who aspired to stereotypically masculine categories remained relatively constant across the age groups. Socialized males and females learn to aspire to positions conventionally allocated to them in the occupational structure. For most females this acceptance means wanting to become clerical, operative, or service workers: secretaries, assemblers, teachers, nurses, beauticians.

When Gerstein, Lichtman, and Barokas (1988) compared adolescent women's occupational plans to those of men, a sizeable percentage increase between 1972 and 1980 was observed in plans to enter the Professional 1 (e.g., accountant, architect, artist, engineer, nurse, social worker) and managerial categories. As expected a much larger percentage of women who were high school seniors in 1980 preferred occupations that were in the professional categories than did their 1972 cohorts. The largest percentage increase for both women and men was in the Professional 1 category. The largest percentage in occupational aspirations decrease for women was in the clerical/sales and teacher categories; for men, in the craftsman/operator category.

In male-dominant occupations, the largest increases in women's preference were in two categories: manager/proprietor and technical. Conversely, there was a decline between 1972 and 1980 for plans to enter the traditionally female occupations of clerical/sales and

service. By 1980, over two thirds of all women planned to enter either professional occupations or those designated as male-dominant; in contrast, only about 55% of all women had similar plans in 1972. For both the 1972 and 1980 groups, more women than men planned to enter professional occupations. These figures may be somewhat misleading because the categories of Professional 1, Professional 2 (e.g., attorney, college professor, dentist, physician, scientist), and Teachers were combined for this data analysis. The data suggested that plans to enter occupations were not quite as clearly sex-segregated in 1980 as in 1972.

There are certain patterns to the relationship between adolescents' occupational aspirations and gender. However, existing gender differences in adolescents' occupational aspirations appeared to be complex (Schulenberg, Goldstein, & Vondracek, 1991).

Cultural and Ethnic Influences

Ethnicity is claimed to be one of the most important social categories in industrial societies (Gordon, 1978). Gordon suggested that "the ethnic group is the locus of a sense of identification." In the area of adolescents' occupational aspirations, Marjoribanks (1985, 1989, 1991) provided evidence that different ethnic backgrounds are associated with attitudes, academic achievement, and aspirations.

In a study from Anglo-Australian, Greek, and southern Italian families, examining relationships between adolescents' school-related attitudes and their occupational aspirations, Marjoribanks (1985) found that ethnicity was an important contextual variable to include for investigating aspirations, since relationships among social status, intelligence, attitudes and aspirations vary for adolescents from different ethnic groups. Similarly, Kerckhoff and Campbell (1977) indicated that ethnic group membership may be a constraining allocation factor for aspirations which are associated with a belief in the availability of opportunities and a belief in individual effort.

Werner (1989) criticized the trends of research in adolescents' occupational aspiration based mainly on Caucasian groups. Considering cultural variability in adolescents' occupational aspirations, Werner examined three different cultural groups on Kauai including Hawaiians and part-Hawaiians, Philippinos, and Japanese. By using a semistructured interview with 518 youth in grade 12, Werner found that more than a third of them aspired to a job above the occupational level of the father in all three ethnic groups. A higher proportion of females than males expressed a desire for upward mobility in their vocational plans in each culture. In educational aspirations, however, the Japanese youth have the highest and the lowest proportion of adolescents in the work force. These Japanese come

predominantly from middle-class and small families and appear to value the pursuit of life goals that maintain their status in an achievement-oriented society. At the same time they do not lose their concern and sense of obligation to family relationships.

Marjoribanks (1989) examined relationships between ethnicity and adolescents' aspirations using 21-year-old Australians from three different cultures. The findings indicated that ethnic-group membership had modest associations with occupational aspirations. In group differences of ability and status attainment for Anglo-Australian and Greek young adults, aspirations was a mediator. In contrast, for southern Italians, ability continued to be associated with the educational and occupational attainment of the young adults. It was not clear why ability remained such a distinctive predictor for southern Italian young adults.

Marjoribank's (1989) study suggests the general proposition that there are ethnic group variations in associations among measures such as ability, school attitudes, academic achievement, aspirations and social status attainment. Ethnicity is an important contextual variable to include in analyses of aspirations. Marjoribanks (1991) supported the proposition that adolescents from various cultural groups have varying perceptions of their learning environments and express

different aspirations. For example, for male Southern Italians and for female Greek adolescents, there were no significant relationships between their perceptions of parents' support for learning and occupational aspirations. In the other cultural groups, the adolescents' perceptions of fathers' and mothers' support for learning have modest-to-moderate associations with the aspiration scores. Marjoribanks (1991) concluded that cultural groups play an active role as a mediator since adolescents develop varying aspirations under similar family and school learning environments.

Summary

The variables in the proposed model have been used in much previous research. Such research was used to develop the model. Socioeconomic background of the family has a stronger effect on occupational aspirations for boys than for girls. However, the effect is greater through the intervening variable of academic achievement. The importance of academic achievement comes from the fact that occupational achievement is dependent upon how well one does in school. When a student works more than 20 hours per week, there begins to be a negative effect on academic achievement because of less time spent studying and reading. Parents also influence academic achievement through their encouragement, especially when grades are high. Finally, the attitudes toward working are also related to

aspirations. Therefore, the model has both a theoretical and a research basis.

CHAPTER III

METHODS

This study examined employed adolescents' occupational aspirations and their relationship to family background, work experience, academic achievement, and work attitudes using a path analysis. This dissertation is based on a selected portion of the data set of a larger project (Clifford, 1992; Shoffner, 1988) on which the author was a research assistant.

The original research was cross-sectional and ex post facto in design. The purpose of that research was to study employment patterns of rural high school students. Clifford (1992) and Goslen (1989) refined the instruments of Steinberg and Greenberger (1981) which were mainly focused on youth employment, education, and work attitudes. A pilot study was conducted in one high school in the western Piedmont section of North Carolina. A four-member research team then administered questionnaires (see the Appendix) to students in randomly selected rural schools.

Description of the Original Sample

Sampling Procedure

Using a geographical resource source (Lonsdale, 1967), Shoffner (1988) set the boundaries for the three regions of North Carolina. With census information (The North Carolina

State Government Statistical Abstracts, 1984), the predominantly rural counties in these regions were identified. The counties were arranged according to their percentage of rurality. All high schools in these counties were identified, and all schools that appeared to have over 50% rural students were selected. All of the schools selected had between 500 and 1500 students.

Preliminary data sheets were administered to all students present on the survey date, providing the name, grade, gender, work status, hours worked per week, and the grades received during the time in which the student was employed. These sheets were subsequently divided into 16 cells by class (9th, 10th, 11th, or 12th), gender (female or male), and work status (working or not-working). A statistical formula determined the number of students to be drawn from each cell, as follows: for any cell with under 20 students, all were included; if a cell had over 20, the square root of the number in the cell was taken and multiplied by four, yielding the number of students to be drawn.

Subjects

Originally, there were 1,481 high school students who completed the survey. At the time of data collection, somewhat less than half of the students were currently working, with 44.2% employed and 55.8% not employed (See Table 1).

Table 1

Demographic Characteristics of High School Employment

(N= 1,481)

Characteristics	Workers (N=654)	Nonworkers (N=827)
	Number (Percent)	Number (Percent)
Sex		
Female	264 (40.40)	448 (54.17)
Male	390 (59.60)	379 (45.83)
Class		
Freshman	83 (12.70)	220 (26.63)
Sophomore	134 (20.50)	251 (30.39)
Junior	206 (31.50)	194 (23.39)
Senior	231 (35.30)	161 (19.49)
Ethnicity		
White	589 (90.10)	697 (82.58)
Black	48 (7.30)	118 (13.98)
Other	17 (2.60)	29 (3.44)
GPA		
A	75 (11.47)	147 (17.78)
B+	120 (18.35)	112 (13.54)
B	173 (26.45)	214 (25.87)
C+	123 (18.81)	155 (18.74)
C	116 (17.74)	134 (16.20)
D	32 (4.89)	41 (4.96)
F	6 (0.92)	7 (0.85)
No answer	9 (1.38)	17 (2.06)
Parents' marital status		
Married	459 (70.19)	578 (69.89)
Widowed	18 (2.75)	35 (4.23)
Divorced	166 (25.38)	191 (23.10)
Other	11 (1.68)	23 (2.78)

Only the students who answered "working" were used as subjects in the present study (N=654). Fewer females (40.4%) than males (59.6%) were employed. As Yamoor and Mortimer's (1990) study indicated, the proportion of adolescents' working is negatively related to the grade level. Since the present study is focused mainly on working adolescents while they are in school, the sample was not evenly distributed across grade levels; three times as many seniors as freshmen were working.

The racial composition of those working was 90.1% white and 7.3% black, with traces of Native American, Hispanic, Asian, and other ethnic groups (see Table 1). It is noteworthy that less than 30% of black students were currently working. In Table 1, the distribution of the present study also showed that the higher the students' grades are, the greater the percentage of students holding jobs ($p < .001$). Of those who were employed, over 56% were making "B" or above.

Duncan's Socioeconomic Index ranges from 4 to 96. In this study, the occupational level of the fathers ranged from 9 to 96 with mean scores of 39.14 for the daughters and 43.13 for sons (see Table 2). The occupational level of the mothers also ranged from 9 to 96 with mean scores about the same for daughters (42.30) and sons (42.73).

Even though the sample seemed representative of rural students in the southeast, caution should be exercised in

Table 2

Parents' Socioeconomic Mean Index Score By Sex, Race, and Year in School

	Father		Mother	
	Mean	n	Mean	n
Sex				
Female	39.14	242	42.30	216
Male	43.13	358	42.73	300
Class				
Freshman	39.23	77	42.08	66
Sophomore	40.93	120	42.26	109
Junior	40.87	187	43.06	162
Senior	43.21	216	42.44	179
Ethnic group				
White	41.99	546	43.32	461
Black	36.05	38	35.60	40
Native Amer.	48.40	5	62.50	4
Hispanic	41.00	3	44.00	2
Asian	38.50	4	18.40	5
Other	24.50	4	32.75	4
Total	41.53	600	42.55	516

generalizing these results to those in other geographical areas or urban populations. Some studies that describe occupational variables in different cultural and ethnic groups were included in the review of literature.

Description of the Model

The path diagram is a useful device for displaying graphically the pattern of causal relations among a set of variables (Pedhazur,1982). The theoretical path model of adolescent occupational aspiration includes three exogenous variables of family background, the number of hours of working, and characteristics of work and one endogenous variable, adolescents' occupational aspirations.

An exogenous variable is a variable whose variability is assumed to be determined by causes outside the causal model. On the other hand, an endogenous variable is one whose variation is explained by exogenous or other endogenous variables in the system. An endogenous variable treated as dependent in one set of variables may also be conceived as an independent variable in relation to other variables. For example, academic achievement is taken as a dependent variable on family background, work attitudes, and attending school and then academic achievement is one of the independent variables in relation to the variable of occupational aspiration.

Students' family background is one of the most important factors influencing academic achievement and

occupational aspirations. Maintaining academic performance may be influenced by (a) family background, (b) adolescents' hours of working (c) students' school commitments, and (d) grade change after students began to work. The number of hours of working may influence students' time spent on studying homework and participating in extra curricular activities, enjoying school, school absence, parents' different treatment, and occupational aspirations. In addition, adolescents' occupational aspirations might be influenced by job characteristics and students' work attitudes which could be related to their time spent on reading for pleasure and job characteristics.

All variables were subjected to a multiple correlation computation. The order of variables in the model in Figure 3 was changed. The expanded theoretical model is shown in Figure 4. Although the number of hours of working and job characteristics did not have a significant correlation with occupational aspirations, they were left in the model because of theoretical implications.

Measurement of the Dependent Variable

The dependent variable, occupational aspiration, was measured by asking the students, "What occupation would you most like to have when you finish your education?" Responses were coded by Duncan's Socioeconomic Index scores. Table 3 shows the mean scores for occupational aspirations by gender, grade level, ethnicity and grade point average.

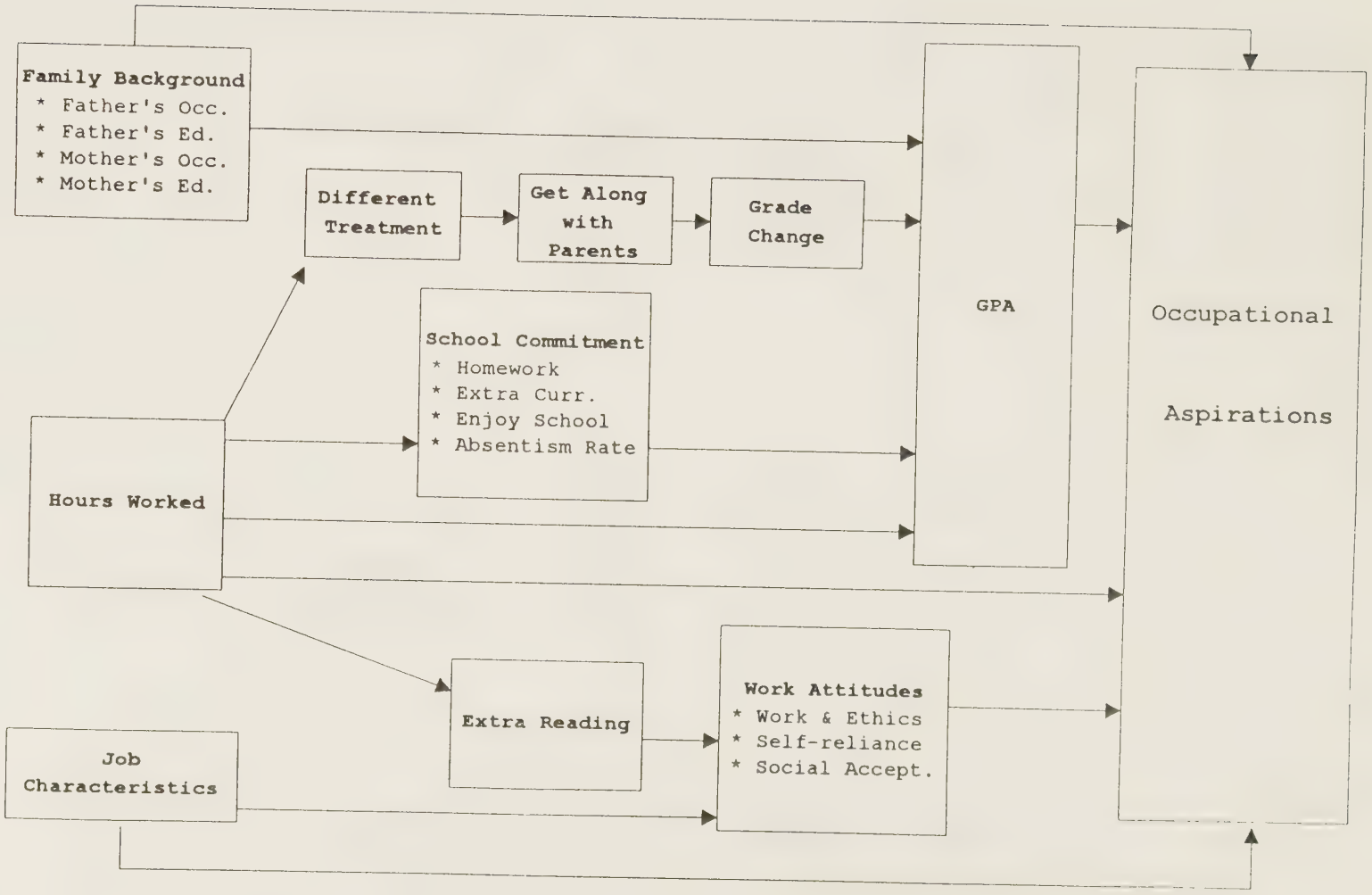


Figure 4. Expanded Theoretical Path Model of Adolescent Occupational Aspirations

Table 3

Mean Occupational Aspiration by Gender, Class, Ethnicity, and GPA (N = 578)

Characteristic	Mean (S.D.)	n
Gender		
Female	58.80 (19.71)	248
Male	54.56 (22.61)	330
Class		
Freshman	51.71 (23.06)	68
Sophomore	54.22 (21.21)	119
Junior	59.29 (21.01)	179
Senior	56.53 (21.30)	212
Ethnicity		
White	56.46 (21.28)	519
Black	55.86 (24.22)	43
Other	55.18 (23.68)	16
GPA		
A	67.86 (19.76)	66
B+	59.32 (21.15)	111
B	57.18 (20.65)	156
C+	50.45 (20.42)	112
C	52.82 (22.27)	97
D	47.67 (19.20)	27
F	63.50 (12.02)	2

As shown in Table 3, females and students with better academic performance had higher occupational aspirations than did their counterparts and the differences are significant for gender ($p < .05$) and GPA ($p < .001$).

Measurement of Independent Variables

All variables in the model except occupational aspiration are described as independent variables in this section. The method of measurement and scoring as well as the codes and descriptive statistics are given with each variable when the data are available. All scores were submitted to an analysis for normality of distribution. Gender and grade level are not included in the model. Instead the model will be compared later for gender and grade level.

Gender

Students indicated whether they were female (coded 1) or male (2).

Grade Level

There were four high school grades included (9th, 10th, 11th, and 12th). For analysis in this study these four levels will be reduced to two: 9th and 10th (coded 1) and 11th and 12th (2). This division was made by virtue of occupational developmental theory which shows a difference between when students usually leave the sophomore years and become juniors.

Family Background

Father's and Mother's Education: Students reported their father's and mother's completed educational level. Ranges began with less than 7th grade (coded 1) up to graduate degree (coded 8), and parents' education was used as a ranked variable.

Father's and Mother's Occupation: An open-ended question "What is your mother's usual occupation?" yielded responses coded by Duncan's Socioeconomic Index score (Duncan, 1961), a continuous variable from 9 to 96. In the original data set, occupation was coded 1 (professional) to 9 (laborer), but since this was an important variable in the model, this variable was changed to a continuous variable.

Academic Achievement (GPA)

Grades were self-reported in response to the question "What is your grade point average in school this year?" Choices included about-an-A average (coded 1), B+ average (2), B (3), C+ (4), C (5), D (6), and F (7).

Hours Worked Weekly

Students were asked "How many hours do you usually work each week? Previous studies had indicated that, in many cases, how much students work is more important than whether they work. Although the literature (Steinberg, 1982; Steinberg et al., 1982a, 1982b) indicated that the impact of work changes at about 20 hours per week, hours-worked-weekly was changed to a continuous variable. Table 4 shows the

Table 4

Summary of Subjects' Hours Worked Weekly (N = 654)

Characteristic	Mean (S. D.)	n
Gender		
Female	19.49 (7.98)	255
Male	21.98 (10.39)	370
Class		
Freshman	17.69 (12.92)	76
Sophomore	18.79 (8.70)	129
Junior	21.32 (8.55)	200
Senior	23.02 (9.01)	220
Ethnicity		
White	21.16 (9.52)	563
Black	19.52 (9.04)	46
Other	18.31 (9.27)	16
GPA		
A	16.93 (8.55)	73
B+	20.26 (9.32)	117
B	21.16 (9.97)	165
C+	22.00 (8.98)	117
C	22.52 (9.43)	109
D	22.03 (10.34)	30
F	28.20 (11.69)	5
Total	20.96 (9.55)	625

mean scores for the number of hours worked by gender, grade level, ethnicity, and GPA. The mean number of hours worked was 20.96. Male students worked significantly ($p<.001$) more than female students. As the class level increases, students spend significantly ($p < .001$) more time at their work. Subjects' GPA is significantly ($p < .001$) negatively related to their work hours.

Parent-Child Relationship

Parent-child relationship is assumed (1) to be influenced by adolescents' part-time job experience, especially the number of hours of working, and (2) to influence academic achievement through grade change. Parent-child relationship was examined by two measures: parents' different treatment and get along with parents.

Different treatment was assessed by a question that asked, "Now that you are working, do you notice that your parents treat you differently?" Students were supposed to choose one of the four choices: "they give me a lot more freedom" (coded 1), "they give me a little more freedom" (2), "no difference" (3), and "they give me less freedom" (4). Table 5 shows that more than half (54.7%) of employed students reported their parents gave them more freedom than before they started work.

How students get along with their parents since they began working was measured by a three-point scale ranging from "better than before I started working" (coded 1),

Table 5

Employed Students' Relationship with Parents and Grade Change (N=624)

Variables	N	Percent
Different Treatment		
Less Freedom	20	3.2
No Change	262	42.1
Little more Freedom	172	27.6
More Freedom	169	27.1
Get along with Parents		
Worse than before	51	8.3
About the same	462	75.0
Better than before	103	16.7
Grade Change		
Shown a big drop	27	4.3
Down a little	152	24.4
Same as before	351	56.4
Little better	63	10.1
Much better	29	4.7

"about the same as I always have" (2), and "worse than before I started working" (3). Most students (75%) answered that their relationships with parents were unchanged since they began to work. More students replied that working changed their relationship with parents to positively (16.7%) rather than negatively (8.3%) (see Table 5).

Grade change was a variable for students to assess any changes in their grades since they started working. It was measured by a five-point scale ranging from "my grades are much better" (coded 1), "my grades are a little better" (2), "no, my grades are the same as before" (3), "my grades have gone down a little" (4), and "my grades have shown a big drop" (5). Table 5 shows that more than half of the students (56.4%) reported that their grades were unchanged since they began to work. When the group with the increased GPA was compared to the decreased GPA, there was a tendency that working might work more negatively to change students GPA.

Commitment to School

Commitment to school is assumed to be influenced by the number of the number of hours of working and to influence academic achievement. The school commitment variables included four measures of school involvement: frequency of school absence, school enjoyment, time spent on studying homework, and time spent in extracurricular activities.

Frequency of school absence was assessed by a question that asked, "Since you started working, have you noticed any change in the number of days you are absent from school?" Students had five choices: "absent much less often" (coded 1), "absent a little less often" (2), "no change" (3), "absent a little more often" (4), and "absent much more often" (5). Table 6 shows that more than 77% said there was no change in their record of school absence.

School enjoyment was measured by a four-point scale ranging from "don't ever enjoy school" (coded 1), "only enjoy school once in a while" (2), "enjoy school quite a lot of the time" (3), and "almost always enjoy school" (4). Table 6 shows that 62.8% enjoyed school a lot of the time or almost always.

Amount time of spent on studying and participating in extracurricular activities per week were answered in response to the question "On the average, about how many hours per week do you spend?" Choices were "none" (coded 1), "less than 2 hours" (2), "3-6 hours" (3), "7 - 12 hours" (4), "13 - 20 hours" (5), and "21 or more hours" (6). Most students spent less than two hours per week on any of the three activities (see Table 7). It should be remembered that they worked on the average more than 20 hours per week.

Reading Books for Pleasure

Students were asked, "On the average, about how many hours per week do you spend reading books, magazines or

Table 6

Employed Students' Commitment to School (N=624)

Variables	N	Percent
School Absence		
Much less	45	7.2
Little less	18	10.2
No change	486	77.4
Little more often	65	10.4
Much more often	14	2.2
School Enjoyment		
Don't ever	45	7.5
Once in a while	178	29.7
A lot of the time	260	43.3
Almost always	117	19.5

Table 7

Hours per Week Spent on Non Employment Activities Beyond School(N=624)

Activities	N	Percent
Extracurricular activities		
None	218	34.2
Less than 2 hrs	185	29.0
3-6 hrs	103	16.2
7-12 hrs	75	11.8
13-20 hrs	38	6.0
21 or more hrs	18	2.8
Studying		
None	47	7.3
less than 2 hrs	283	44.2
3-6 hrs	199	31.1
7-12 hrs	73	11.4
13-20 hrs	26	4.1
21 or more hrs	12	1.9
Pleasure Reading		
None	131	20.5
less than 2 hrs	317	49.7
3-6 hrs	128	20.1
7-12 hrs	41	6.4
13-20 hrs	13	2.0
21 or more hrs	8	1.3

newspapers for pleasure?" Choices included "none" (coded 1), "less than 2 hours" (2), "3-6 hours" (3), "7 - 12 hours" (4), "13 - 20 hours" (5), and "21 or more hours" (6). In Table 7, most students (70.2%) reported that they spend less than 2 hours per week on reading for pleasure.

Job Characteristics

The subjects responded to the direction "Please indicate how much you agree or disagree with the statement below: the product or service I help provide is up to the standards that the public should get." A four-point response was coded "strongly disagree" (1), "somewhat disagree" (2), "somewhat agree" (3), and "strongly agree" (4). More than half of the students answered that they strongly agreed (60.00 %). Only 16 students strongly disagreed.

Work Attitudes

Clifford (1992) performed a factor analysis on the data from the pilot study to validate the six work attitudes found by Steinberg, Greenberger, Vaux, and Ruggiero (1981): social commitment; cynicism about work; work orientation; reliance on self; materialism; acceptance of unethical business practices. Subjects responded to a 60-item four-point scale, including "strongly agree" (coded 1), "slightly agree" (2), "slightly disagree" (3) and "strongly disagree" (4). Clifford's factor analysis of these 60 items resulted in a set of factors somewhat different from those identified

by Steinberg et al. (1981): ethics and work; self-reliance; extrinsic rewards of work; responsibility; intrinsic rewards of work; and social acceptance. Only three of these six factors were used in the present study: ethics and work, self-reliance, and social acceptance (see Table 8). The mean factor score for each factor by gender, grade level, ethnicity and GPA are shown in Table 9. Females, seniors, and "A" students made the highest scores on each of the work attitudes.

These three factors were chosen for this study because the job site for the students should foster improving student work attitudes. Also, these three work attitudes would be strongly related to developing their occupational aspiration.

Procedures for Path Analysis of the Model

Path analysis, or causal path modeling, is an analytic procedure that is based on the theoretical specification of explicit, detailed models that portray the causal relationships among a set of variables (Pedhazur, 1982). It is possible to estimate the strength of those causal relationships along each path of the hypothesized model. For example, how much of the variance in occupational aspiration can be directly predicted by academic achievement? Does academic achievement mediate, increase, or decrease the strength of family background as a predictor? Furthermore, do work attitudes mediate the

Table 8

Items in Work Attitudes Factors

Factor	Items
Ethics and Work	
	1. In my opinion, it's alright for workers who are paid a low salary to take little things from their jobs to make up for it.
	2. It's acceptable to me if a teenage worker cheats a little to make a profit.
	3. Workers are entitled to call in sick when they don't feel like working.
	4. People who break a few laws to make a profit aren't doing anything I wouldn't do in their position.
	5. When a job turns out to be much harder than I was told it would be, I don't feel I have to do it perfectly.
	6. A person is responsible only for the happiness of his family, relatives and close friends.
	7. Even if it's illegal to hire teenagers to do certain jobs, it's okay for an employer to do it to help a kid out.
Self-Reliance	
	1. I feel very uneasy if I disagree with what my friends think.
	2. It is best to agree with others rather than say what you really think, if it will keep the peace.
	3. In a group I prefer to let other people make the decisions.
	4. When things go well for me, it is usually not because of anything I myself have done.
	5. You can't be expected to make a success of yourself if you had a bad childhood.
	6. Luck decides most things that happen to me.

Table 8 (continues)

Social Acceptance

1. I would rather not work in an environment where there are people of different races or skin color.
2. I wouldn't like to go on a weekend trip with people who have a different ethnic background from me.
3. I would not mind working closely on a job with a person whose skin color is different from mine.
4. I would not want to work closely with a person who had very different social skills from me.

Table 9

Mean Factor Scores of Subjects' Work Attitudes (N = 654)

Characteristic	Work and Ethics	Self-Reliance	Social Acceptance
Gender			
Female	23.89	18.99	13.23
Male	21.02	17.09	11.88
Class			
Freshman	21.36	17.03	11.98
Sophomore	21.45	17.74	12.30
Junior	22.02	17.69	12.48
Senior	23.10	18.45	12.66
Ethnicity			
White	22.19	17.83	12.37
Black	21.91	18.33	12.93
Other	22.75	17.99	13.31
GPA			
A	23.04	19.26	13.07
B+	22.63	18.12	12.69
B	22.58	17.89	12.52
C+	21.74	17.61	12.42
C	21.39	17.17	11.72
D	21.32	17.74	12.42
F	16.00	13.00	9.40
Total	22.18	17.87	12.44

strength of academic achievement in predicting occupational aspirations?

The standard procedure for computing a path analysis was used: (a) make a correlation matrix for all variables to find the magnitude of the relationships, (b) regress each dependent variable throughout the model on the theorized independent variables to find significant paths, (c) revise the path model by removing all paths which are not significant, and then (d) regress each dependent variable on all independent variables remaining. The model was then tested by gender and by grade level.

A path analysis shows the paths or routes through which independent (antecedent) variables, intervening variables, and dependent (consequent) variables relate to each other. The path coefficient (standardized beta weight, B) shows the size of change needed in the independent variable in order to change the dependent variable by one unit. Taking the procedure one step further, the multiple correlation coefficient (R) for each predictor variable can be squared (R-square) to show the proportion of the variance in the dependent variable that is explained. All multiple correlation coefficients can be cumulated to show the total amount of variance in the dependent variable explained by all of the predictors.

When the model was refined, it was compared by gender and by class level. In addition, a decomposition table was

made to show the size of the direct, indirect, and total influence of each antecedent variable on occupational aspirations.

CHAPTER IV

RESULTS AND DISCUSSION

The underlying assumptions of this study were that family background variables would influence high school students' occupational aspirations. In addition, students' number of hours worked per week and job characteristics were assumed to be significant factors for influencing occupational aspirations. Students' academic performance and students' work attitudes were the variables of theoretical interest.

Family background, the number of hours worked per week, and job characteristics were the exogenous variables. The major intervening variables between these exogenous variables and the dependent variable of occupational aspirations were academic performance and work attitudes.

The number of hours of working was expected to influence the school commitment variables of students' time spent on studying homework and extracurricular activities, enjoying school and school absence. These school commitment variables would be influenced by the number of hours of working per week and would impact their academic performance. The number of hours of working was expected to influence students' time spent in extra reading, a result which would modify their work attitudes. Characteristics of

the jobs which students held was considered to influence students' work attitudes.

Variables related to the high school students' relationship with parents after they began working were expected to influence students' academic performance. That is, parents' different treatment was entered first because students' relationship with their parents was affected by parents' treatment. Grade change followed because better relationship with parents would give children a motivation to satisfy their parents' expectations of their academic performance. Thus, a hypothesized causal path of the influence of family background, students' academic performance, and work attitudes on high school students' occupational aspirations was developed and then tested with data from high school students.

A brief summary of the necessary statistical assumptions for path analysis is presented below. It is followed by an examination of the testing of the path model. After the model was tested on the entire sample, the model was tested separately on the two gender groups and two grade level groups. For each of the five tests, regression analysis tables, path diagrams, and decomposition tables are presented.

Statistical Assumptions for Path Analysis

Path analysis is one form of multiple regression methodology. In order to examine the appropriateness for

regression and subsequent path analysis, following assumptions must be met:

(1) All variables must be measured at the interval level and without error.
(2) For each set of values for the k independent variables, the mean value of the error term is 0.
(3) For each set of values for the k independent variables, the variance of the error term is constant.
(4) For any two sets of values for the k independent variables, the error terms are uncorrelated.
(5) Each independent variable is uncorrelated with the error term.
(6) There is no perfect collinearity, that is, no independent variable is perfectly linearly related to one or more of the other independent variables in the model.
(7) For each set of values for the k independent variables, the variance of the error is normally distributed (Berry & Feldman, 1985 pp.10-11).

The assumptions of 2, 3, 4, 5, and 7 can be tested by using SPSS regression test program. The assumption of 6 can be checked by examining the correlation matrix.

In addition, Pedhazur (1982) listed a set of assumptions applied specifically to path analysis. These included (a) the relations among the variables in the model are linear, additive, and causal, and (b) there is a one-way causal flow in the system, that is, reciprocal causation between variables is ruled out.

For the most part it appeared that the above assumptions were satisfied. The dependent variable of the present study, high school students' occupational

aspiration, measured by Duncan's Socioeconomic Index was developed as a status continuum. Since the scale of measurement of the dependent variable is an interval level it is possible to ascertain causal linkages among variables (Proctor, 1974).

Testing the Theoretical Path Model

The data were examined through a series of single and multiple regressions as specified by the theoretically derived path model (see Figure 4). SPSS multiple regression procedures offer several options for handling missing values (Nie et al., 1975). The listwise procedure eliminated any case from the analysis when a single item value is missing. After listwise procedures were applied, 381 of 654 eligible enlisted subjects were included in the analysis. Similarly, 169 of a possible 264 female and 189 of a possible 390 males were retained. Also, 138 of a possible 217 freshmen and sophomore students, and 281 of a possible 437 junior and senior students were maintained. The model was then tested on the whole group and later analyzed separately for the two genders and two grade levels (9th/10th and 11th/12th).

All regression equations were performed utilizing a multiple correlation matrix containing each of the variables for that equation. The path analysis procedures followed in this study were outlined by Pedhazur (1982). He recommended using a methodology that involved a sequence of multiple regression equations for each endogenous variable in the

model. Each endogenous variable, treated as dependent in one set of variables, may be conceived as an independent variable in relation to another set of variables. In this present study, each regression sequence began with the exogenous variables and added, one by one in the causally prescribed order, all specified independent variables. For each independent variable in the equation there was a path coefficient (standardized beta weight) indicating the amount of expected change in the dependent variable as a result of a unit change in the independent variable.

The results are presented separately for each of the dependent variables. Within each path analysis (single and multiple regressions) of the dependent variables, the procedures were: (a) a regression of each dependent variable on all predictors; and (b) a subsequent regression of the dependent variable on those predictors which were found to be statistically significant in the earlier analyses. The final path model contained only the significant predictors found by the series of regression analyses.

From the information generated by the path coefficients, a decomposition procedure gives the total effect, the direct effect, and the indirect effect via each intervening variable. This decomposition procedure produced interpretations for a conformed model.

Table 10 shows the correlations among the variables for the predicted path model. As expected, family background

Table 10

Multiple Correlation Matrix for All Variables in Revised Model (N=381)

	MOCC	MED	FOCC	FED	GPA	TRDF	GTPR	GRCH	HRWK
MOCC									
MED	.418**								
FOCC	.267**	.252**							
FED	.279**	.472**	.384**						
GPA	.114**	.113**	.111**	.155**					
TRDF	-.051	-.060	-.026	-.095*	-.035				
GTPR	-.085	-.041	-.052	-.069	.057	.274**			
GRCH	-.070	.042	-.074	-.028	.197**	-.012	.128**		
HRWK	-.065	-.084*	-.014	-.142**	-.163**	.182**	-.010	-.084*	
EXSC	.096*	.162**	.031	.160**	.139**	-.015	-.008	-.003	-.124**
STDY	.114**	.147**	.012	.101*	.231**	-.048	-.002	.064	-.125**
ENJS	-.006	.081	-.049	.078	.185**	.037	.067	.072	-.105*
ABCH	-.044	-.061	.076	-.031	-.060	.008	-.105*	-.348**	.045
REPL	.107*	.087*	.061	.114**	.082*	.004	-.026	.059	-.132**
JOBC	-.058	.015	.037	.041	.088*	.048	.002	.008	.050
WKTH	-.01	-.049	.056	.076	.161	-.011	.016	-.050	-.041
SFRL	.103*	.038	.048	.104*	.170**	.018	-.041	-.084*	-.022
SOAC	-.080	-.020	.030	.103*	.148**	-.009	.008	-.023	-.056
OCAS	.177**	.141**	.116**	.210**	.225**	-.017	-.016	-.061	-.039

	EXSC	STDY	ENJS	ABCH	REPL	JOBC	WKTH	SFRL	SOAC
STDY	.199**								
ENJS	.207**	.270**							
ABCH	-.036	-.063	-.012						
REPL	.054	.235**	.093*	-.008					
JOBC	.053	-.032	.065	.039	-.014				
WKTH	.036	.066	.216**	-.026	.134**	.178**			
SFRL	.081	.131**	.126**	.041	.180**	.110*	.565**		
SOAC	.139**	.159**	.219**	.038	.198**	.115**	.483**	.393**	
OCAS	.182**	.220**	.109*	-.001	.029	.082	.135**	.143**	.159**

* p < .05 ** P <.01

MOCC = Mother's Occupation
FOCC = Father's Occupation
GPA = Grade Point Average
GTPR = Getting Along Parents
HRWK = Hours of Working
STDY = Studying Homework
ABCH = Absence Change
JOBC = Job Characteristics
OCAS = Occupational Aspirations

MED = Mother's Education
FED = Father's Education
TRDF = Different Treatment
GRCH = Grade Change
EXSC = Extra Activities
ENJS = Enjoying School
REPL = Reading for Pleasure
WKTH = Work and Ethics
SFRL = Self Reliance
FOAC = Social Acceptance

(FED, FOCC, MED, MOCC), academic performance and related work attitudes were positively related to students' occupational aspirations. However, students' number of hours working and job characteristics were not significantly related to their occupational aspirations. Since the number of hours of working has no direct influence on occupational aspirations, the analysis of the model began with this variable and the dependent variables it is predicted to influence: studying homework, extracurricular activities, enjoying school, absence change, extra reading, and parents' treatment.

Influence of the Number of Hours Worked

The zero order correlations for the path model variables selected for the number hours of working are contained in Table 10. The number of hours of working is negatively related to three school commitment variables including participating in extra curricular activities (r=-.124), studying homework (r=-.125), and enjoying school (r=-.105); that is, the more hours spent working, the less time spent on school activities outside the school day. It is noteworthy that the correlation coefficients of amount of time spent on extracurricular school activities and studying homework with the number of hours of working are about the same. These correlations are statistically significant. How much high school students enjoy going to school has a lower negative correlation to the number of hours of working

than do the two variables, extracurricular activities and homework. Reading for pleasure also was significantly negatively correlated (r=-.132). Unexpectedly, the relationship of changes in number of absences after starting to work with the number of hours of working was very small and nonsignificant (r=.045). However, the number of hours worked was positively and significantly correlated to parents' different treatment (r=.182).

Zero order regressions were computed between the number of hours of work and the five variables which had been found to be significantly correlated in negative relations, the Beta weights were for parents' different treatment (B=.1812), extracurricular activities (B=-.1243), studying homework (B=-.1248), and enjoying school (B=-.1046), extra reading (B=-.1317) (see Table 11). The magnitude of the variance explained by number of hours worked for four of the five dependent variables was less than 2%.

The number of hours of work influenced the parents' treatment of high school students significantly and the Beta weight was .1812. The adjusted R-square was .0312, a result which means that 3.12% of parents' different treatment to high school students can be predicted based on students' number of hours of work.

Predictors of Academic Performance

Table 10 also contains the correlations for the path model variables of academic performance (GPA) and its

Table 11

Five Separate Regressions on the Number of Hours of Working

	Dependent Variables				
Predictor	Extra Activ.	Studying Homework	Enjoy School	Reading Extra	Different Treatment
Hours of Work					
b	-.0176	-.0132	-.0096	-.0136	.0170
B	-.1243**	-.1248**	-.1046*	-.1317**	.1812***
Constant	2.7397	2.9320	2.9593	2.5158	2.4356
Adjusted R-Square	.0138	.0140	.0092	.0157	.0312
F	9.5023**	9.6418**	6.4660*	10.7207**	20.3998***

* $p < .05$ ** $p < .01$ *** $p < .001$

predictors. It is noteworthy that the four family background variables are positively related to high school students' academic performance. Although all of the correlation coefficient scores are statistically significant, the variable of father's education (r=.155) has the highest coefficient. The other three variables, father's occupation (r=.111), mother's education (r=.113), and mother's occupation (r=.114), are about the same magnitude.

The number of hours of working (r=-.163) and grade change (r=.197) are significantly negatively correlated with GPA at the .001 level. The amount of time spent on extracurricular activities (r=.139), studying homework (r=.231), and enjoying school (r=.185) are significantly positively correlated to students' academic performance. The relationship between studying homework and academic performance (GPA) is the strongest of all relationships between predictor variables and academic performance.

A regression analysis was run for high school students' academic performance on all nine predictors presented above. Although school absence change had a statistically significant correlation with academic performance, it cannot be kept in the equation, because it is not related to the number of hours of working, the antecedent. Table 12 shows that the variance in academic performance explained by the nine independent variables is 14.24%. The entire equation

Table 12

Regression of GPA on Family Background, Number of Hours of Working, and Work Related Variables

	Dependent Variable Academic performance (GPA)	
Independent Variables	b	B
Studying Homework	.26666	.1971**
Change Grade	.2799	.1675**
Hours Work	-.0179	-.1169*
Enjoy School	.1961	.1151*
Father's Education	.0881	.0933
Father's Occupation	.0049	.0657
Mother's Occupation	.0044	.0658
Mother's Education	-.0673	-.0679
Extra Activities	.0608	.0577
Constant	2.4785	
Adjusted R Square	.14239	
F	8.60077**	

* $p < .05$ ** $p < .001$

was significant for predicting high school students' academic performance. The regression analysis for academic performance showed that studying homework (B=.1971), grade change (B=.1675), number of hours of working (B=-.1169), and enjoying school (B=.1151) were the only significant predictors of academic performance when entered along with these independent variables. Family variables did not predict academic performance. Studying homework and grade change were the strongest predictors of academic performance. As expected, the number of hours of working was negatively related to students' academic performance. Enjoying school had about the same magnitude of influence on their academic performance but in a positive direction.

For a trimmed model, the four significant variables were added in the causally prescribed order to screen predictors of academic performance. Father's education was also added because theoretically it should have an influence on GPA. The order of variables between enjoying school and father's education was changed. Table 13 shows the trimmed model of children's academic performance using five predictors. The adjusted R-square in this trimmed model is .13428, a result which means that 13.43% of high school students' academic performance can be predicted based on the five significant predictors.

The next set of analyses dealt with parent-child relationships (treatment since working, how they get along,

Table 13

Regression of GPA on Family Background, Number of Hours of Working, and Work Related Influences: Trimmed Model

	Dependent Variable Academic performance (GPA)	
Independent Variables	b	B
Studying Homework	.2785	.1979***
Change Grade	.2985	.1692***
Hours of Work	-.0189	-.1208**
Father's Education	.1107	.1149**
Enjoy School	.1626	.0950*
Constant	2.5961	
Adjusted R Square	.13428	
F	17.96885***	

* $p < .05$ ** $p < .01$ *** $p < .001$

and grade change), work attitudes, job characteristics, reading for pleasure, and the number of hours worked.

Parent-Child Relationships

As shown in the correlation matrix in Table 10, parents' different treatment is positively correlated to the relationship between a child and parents (r=.274). If children get along with their parents better than before they started working, it is also positively related to better grade change (r=.128). When students felt that their parents treat them differently than they did before the students started to work (giving them more or less freedom), it influenced their relationship with their parents. In other words, if parents gave them more freedom, then the relationship between parents and child tended to be better than before. It finally is related to the students' grade change (r=.128) which means that better relationships with parents may cause students to have better grades. Table 14 shows that parents' different treatment after the students worked explains 7.4% of the variance in their relationship. The path would follow from getting along with parents as a significant predictor of students' grade change.

Predictors of Work Attitudes

The correlation matrix in Table 10 showed how extra reading for pleasure and a characteristic of the job high school students held are related to work attitudes. Both variables have significant positive relationships with each

Table 14

Two Regression Analyses on Parent-Child Relationship

	Dependent Variables			
	Get along with Parents		Grade Change	
Independent Variables				
	b	B	b	B
Different Treatment	.1535	.2744**		
Get Along With Parents			.2135	.1277*
Constant	1.6559		2.4137	
Adjusted R Square	.0738		.0147	
F	49.7474**		9.9038*	

* $p < .01$ ** $p < .001$

of the three work attitudes: work and ethics, self-reliance, and social acceptance. When the two predictors were used to find the best equation for each work attitude, the equations were significant (see Table 15).

The variance of work ethics in work attitudes predicted by extra reading and job characteristic was 4.6%; for self reliance, 4.7%; and for social acceptance, 4.5%. At this point all three work attitude variables remain in the model since all equations were significant.

Predictors of Occupational Aspirations

The correlation matrix for occupational aspirations revealed that all predictors, including four family background variables, GPA, and three work related attitudes, were significantly related to the dependent variable (see Table 10). A regression analysis was run for high school students' occupational aspirations on those eight variables.

When the regression analysis for high school students' occupational aspiration was computed, it showed that only father's education, mother's occupation, student's GPA, and work attitudes of social acceptance were positive and significant predictors (see Table 16). The entire equation was significant, and 9.9% of the variance was explained by the eight variables included. Not surprisingly, the students' occupational aspirations were most strongly influenced by their academic performance (B=.2029). Among family background variables, mother's occupational level

Table 15

Three Multiple Regressions for Predictors of Work-Related Attitudes

	Dependent Variables Work Attitudes					
	Work Ethics		Self Reliance		Social Acceptance	
Independent Variables						
	b	B	b	B	b	B
Extra Reading	.5818	.1382**	.6805	.1975**	.5053	.1898**
Job Character	.9804	.1778**	.4935	.1087**	.3944	.1133*
Constant	17.4785		14.7630		9.9556	
Adjusted R Square	.0463		.0467		.0454	
F	14.5100**		14.1266**		14.1228**	

* $p < .01$ ** $p < .001$

Table 16

Relationship between Occupational Aspirations and Family Background, GPA, and Work-Related Attitudes

	Dependent Variable Occupational Aspirations	
Independent Variables	b	B
GPA	3.1311	.2029**
Mother's Occupation	.1329	.1292*
Social Acceptance	1.0207	.1212*
Father's Education	1.5816	.1104*
Self Reliance	.3919	.0420
Mother's Education	.4926	.0374
Work Ethics	-.2651	-.0267
Father's Occupation	.0091	.0059
Constant	16.5439	.1104
Adjusted R Square	.09858	
F	11.4161**	

* $p < .05$ ** $p < .001$

(B=.1292) influenced students' occupational aspirations somewhat more than father's educational level (B=.1104) did. Father's occupation and mother's educational level were not significant predictors of children's occupational aspirations. Among three work-related attitudes, only social acceptance proved to be a significant predictor of high school students' occupational aspirations (B=.1212). It explained 9.9% of the variance in occupational aspirations.

Using only the four predictors that were significant, the regression analysis was rerun for occupational aspirations. The results of this subsequent regression for occupational aspirations are shown in Table 17. Although the positive relationships of occupational aspirations with the four predictors remain the same, the beta weights and adjusted R-square have changed. GPA and mother's occupation were the largest predictors of students' occupational aspirations. However, the variable of father's education, which was the fourth variable in the first model, was the third most significant variable in the trimmed model in predicting students' occupational aspiration. The adjusted R-square showed that the equation using four predictors fit slightly better (as seen by an increase in adjusted R-square to .1010).

Table 17

Relationship between Occupational Aspirations and Family Background, GPA, and Work-Related Attitudes: Trimmed Model

	Dependent Variable Occupational Aspirations	
Independent Variables	b	B
GPA	2.9960	.1943***
Mother's Occupation	.1469	.1423**
Father's Education	1.7806	.1232*
Social Acceptance	.9233	.1105*
Constant	16.8647	
Adjusted R Square	.10101	
F	12.7411***	

* p <.05 ** p <. 01 *** p < .001

Revised Model and Decomposition

The relationships between endogenous and antecedent variables in the revised model are presented in Figure 5. The revised model shows four direct predictors of occupational aspirations, two from family background, one from work attitudes, and academic achievement. Five variables (father's education, grade change, number of hours of working, studying homework, and enjoy school) predict academic achievement which intervene between those five variables and occupational aspirations. Two variables (extra reading and job characteristics) predict the social acceptance work attitudes which are a direct predictor of occupational aspirations. Enjoying school, studying homework, and extra reading were influenced by students' number of hours of working. Parents' different treatment was also influenced by students' number hours-worked. Parents' different treatment of high school students positively influenced the parent-child relationship. Students' relationship with parents impacted on their grade change compared with the relationship before they started to work.

Utilizing the procedures by Pedhazur (1982), the path effects for the analysis performed on high school students' occupational aspirations were decomposed and reported in Table 18. Direct effects are based on the Beta weight for the predictor. Indirect effects are based on multiplying

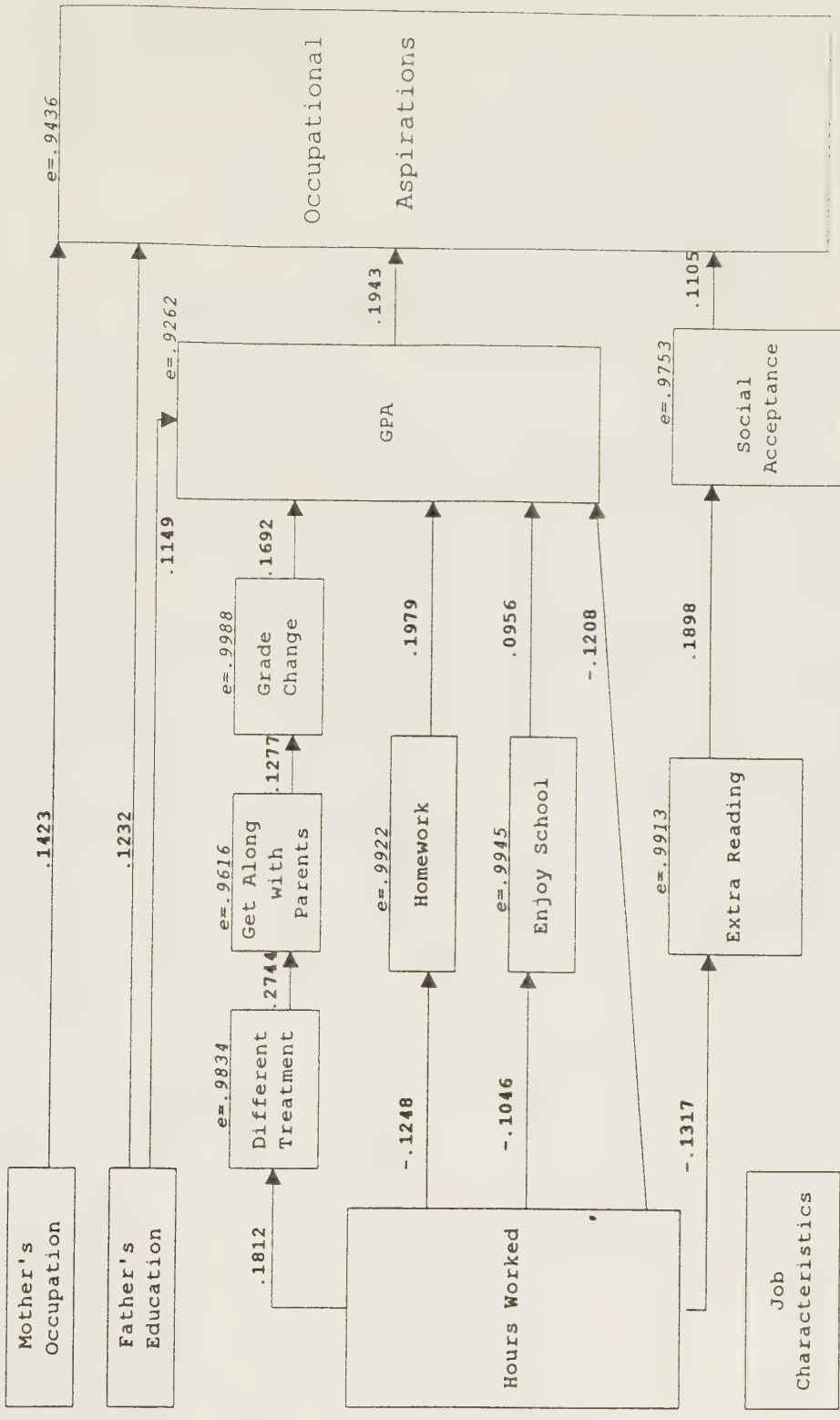


Figure 5. Revised Path Model of Adolescent Occupational Aspirations

Table 18

Decomposition Table for the Revised Model of Occupational Aspirations for High School Students

Dependent Variables	Independent Variables	Direct Effect	Indirect Effect (via) GPA	STU	ENJ	DFTR	Total Effect
Occupational Aspiration	GPA	.1943					.1943
	Father's Education	.232	.0223				.1455
	Mother's Occupation	.1423					.1423
	Social Acceptance	.1105					.1105
GPA	Studying	.1979					.1979
	Gr. Change	.1692					.1692
	Hrs. Work	-.1208		-.0247	-.0099	.0011	-.1543
	Father's Education	.1149					.1149
	Enjoy Sch.	.0950					.0950
Social Acceptance	Extra Read	.1898					.1898
	Job Character	.1133					.1133
Different Treatment	Hrs. Work	.1812					.1812
Get Along Parents	Different Treatment	.2744					.2744
Grade Change	Get Along Parents	.1277					.1277
Enjoy School	Hrs. Work	-.1046					-.1046
Study Homework	Hrs. Work	-.1248					-.1248
Extra Reading	Hrs. Work	-.1317					-.1317

the Beta weights of each predictor in the path. That outcome is added to the direct effect to get the total effect. For example, the Beta weight along the path from father's education to GPA (B=.1232) is multiplied by the Beta weight on the path from GPA to Occupational aspirations (B=.1943), resulting in an indirect effect of .0223 which is added to .1232 for a total effect of .1455.

The decomposition of effects revealed that students' academic performance had the greatest direct influence on students' occupational aspirations. Although mother's occupation is the next direct influential variable following academic performance, the total effects for father's education exceeded mother's occupation. It was found that .123 of the effects were transmitted directly, and .022 of the effects were transmitted through academic performance. When family background influence is considered, only mother's occupation and father's education are meaningful variables to predict students' occupational aspirations. The direct effect for social acceptance was .111. Among three work attitudes, social acceptance was the only one to be included in the model.

For high school students' academic performance, time spent on studying homework had the greatest direct and total effect. Grade change is the next direct influential variable of GPA. The number of hours of working is the third variable following grade change. Even though it was

found that there were indirect effects through either studying homework and enjoy school, the variable of the number of hours of working still remains as the third significant variable of students' academic performance. Father's education and enjoying school were the variables following the number of hours of working.

Table 18 also revealed that extra reading had the greater direct influence on students' social acceptance work attitudes than did job characteristics. Both variables directly affect social acceptance. It was found that students' grade change was influenced by the variable of getting along with parents and the score of total effect was .128. Parents' different treatment of high school students influenced the parent-child relationship, and both the direct and total effect was .274.

When the influence of the number of hours of working was considered, enjoying school, studying homework, extra reading and different treatment were influenced directly by the number of hours of working. The total effect score of each was -.1046 for enjoying school, -.1248 for studying homework, -.1317 for extra reading and .1812 for different treatment. Their total effect scores were the same as their direct effect scores since there were no intervening variables between them.

Testing the Occupational Aspirations Model for Gender and Grade level

Occupational Aspirations by Gender

The literature showed that males and females seem to aspire to future occupations through different influential variables. Therefore, the theoretical model tested first on the whole group was then tested for gender.

Female Students Group. The zero order correlations and simple descriptive statistics for the variables in the final path model as they applied to the sample of female students are contained in Table 19. Grade change (r=.265) and studying homework (r=.244) are the only two variables which are significantly related to female students' academic performance. Neither the number of hours of working nor enjoying school are correlated with female students' academic performance.

School commitment variables such as studying homework and enjoying school are not influenced by the variable of the number of hours of working. Rather, female students' amount of time spent on studying homework are strongly related to enjoying school (r=.323) and reading for pleasure (r=.137). It is noteworthy that the number of hours of working per week was significantly correlated only to students' amount of time for reading for pleasure (r=-.197).

Reading for pleasure was the only variable which was significantly correlated with female students' work

Table 19

Correlation Matrix for All Variables in Revised Model:

Female Students (N=169)

	MOCC	FEDU	GPA	TRET	GETA	GRCH	HRWK	STUY
MOCC								
FEDU	.279**							
GPA	.100	.141*						
TRET	-.063	-.068	-.031					
GETA	-.176*	-.137*	.067	.303**				
GRCH	-.056	-.041	.265**	-.072	.149*			
HRWK	-.042	-.211**	-.096	.202**	-.042	-.195**		
STUY	.165*	.157*	.244**	-.099	.018	.116	-.129	
ENJY	-.051	.005	.109	.009	.045	.197**	-.042	.323**
READ	.153*	.142*	.057	.003	.035	-.005	-.197**	.137*
JOB	-.054	.027	.122	.043	.045	.000	.072	-.056
SOCA	-.059	.124	.123	.024	-.022	-.025	-.069	.181**
ASPR	.131	.153*	.258**	.022	.096	.032	.070	.215**
MEAN	42.29	4.39	5.05	2.79	2.08	2.82	19.48	2.81
STD	21.01	1.57	1.37	.85	.49	.85	7.98	.97
MIN	9.00	1.00	2.00	1.00	1.00	1.00	3.00	1.00
MAX	96.00	8.00	7.00	4.00	3.00	5.00	40.00	6.00
RANGE	87.00	7.00	5.00	3.00	2.00	4.00	37.00	5.00

	ENJY	READ	JOB	SOCA	ASPR
READ	.064				
JOB	-.020	-.071			
SOCA	.188*	.208**	-.067		
ASPR	.056	-.059	.062	.025	
MEAN	2.88	2.34	3.49	13.24	58.80
STD	.81	.99	.71	2.35	19.71
MIN	1.00	1.00	1.00	5.00	17.00
MAX	4.00	6.00	4.00	16.00	96.00
RANGE	3.00	5.00	3.00	11.00	79.00

* $p < .05$ ** $p < .01$

MOCC = Mother's Occupation
FEDU = Father's Education
GPA =Grade Point Average
TRET =Different Treatment
GETA =Get along Parents
GRCH =Grade Change
HRWK = Hours per Week
STDY =Study Homework
ENJY = Enjoy School
READ =Reading for Pleasure
JOB = Job Characteristic
SOCA = Social Acceptance
ASPR =Occupational Aspiration

attitudes, social acceptance (r=.208). Job characteristics was not related to their social acceptance. The relationship between different treatment and getting along with parents remained significant (r=.303). Also, the relationship of getting along with parents with grade change remained significant (r=.149) for the female student group.

The correlation matrix showed that the major dependent variable, occupational aspirations, had only two significant correlations: father's education (r=.153) and academic performance (r=.258) (see Table 19). Thus, the four regression analyses, originally run for the revised model developed on the total sample, were rerun for female students using only the variables that had a significant correlation coefficient. Although the number of hours of working was a significant predictor of extra reading for pleasure, and extra reading for pleasure was a predictor of social acceptance, those variables were not used for the regression analysis. For female students the following predictors entered into the equation:

(1) hours worked as a predictor of parents' different treatment;

(2) different treatment as a predictor of getting along with parents;

(3) getting along with parents as a predictor of grade change;

(4) father's education, grade change, and studying

homework as predictors of GPA;

(5) GPA and father's education as predictors of occupational aspiration.

The regressions for female students showed that relationships of all the independent variables with the dependent variables remain the same as that for the entire sample except that the father's education was removed from the equation as a predictor of occupational aspiration.

The number of hours worked per week was a significant predictor of parents' different treatment for female students. Only 3.7% of variance of parents' treatment was explained by students' number of hours worked. The equation was significant. When getting along with parents was regressed on different treatment, different treatment was a significant positive predictor of getting along with parents (B=.303). It explained 8.8% of the variance. The equation was significant. Getting along with parents was retained as a significant predictor of grade change. Only 1.8% of the variance was explained, but the equation was significant (see Table 20).

When GPA was regressed on the father's education, grade change, and studying homework, those three independent variables were retained as significant predictors (see Table 21). Among the three predictors of GPA, grade change was the strongest independent variable in the equation. More than 12% of the variance was explained by the three

Table 20

Relationship of Different Treatment, Getting Along with Parents and Grade Change with Predictors: Female Students

Independent Variables	Dependent Variables: Different Treatment		Get along with Parents		Grade Change	
	b	B	b	B	b	B
Hours Worked	.0217	.2021**				
Different Treatment			.1734	.3032***		
Get along With Parents					.2599	.1489*
Constant	4.2037		1.5938		2.2772	
Adjusted R Square	.0370		.0883		.0182	
F	10.6476**		25.4113***		5.6439*	

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 21

Relationship of GPA and Occupational Aspiration with Predictors: Female Students

Independent Variables	Dependent Variables: GPA b	GPA B	Occupational Aspirations b	Occupational Aspirations B
Grade Change	.4053	.2569***		
Study Homework	.2593	.1891**		
Father's Education	.1009	.1207*		
GPA			3.8736	.2583***
Constant	2.7579		39.2820	
Adjusted R Square	.1224		.0629	
F	12.5302***		17.5801***	

* p <.05 ** p <.01 *** p <.001

variables. The equation was statistically significant. When GPA and father's education were entered in the equation of occupational aspiration, only GPA was a significant predictor (see Table 21). The adjusted R-square was .061, and the equation was significant at the level of .001.

The path model of occupational aspirations for female students is illustrated in Figure 6. The path diagram is helpful in visualizing the flow of effects through the model. Father's education and studying homework influenced high school female students' occupational aspirations through the intervening variable of students' academic performance. The number of hours work influenced parents' treatment positively. Parents who gave more freedom to students had a better relationships with their adolescent children. Then this was positively related to their children's better grade change. Better grade change was a significant predictor of GPA.

The decomposition of effects revealed more detailed information (see Table 22). The decomposition of effects showed that female students' academic performance was the only variable with direct influencing occupational aspirations. There was no intervening variable between academic performance and occupational aspirations so that the total effect was the same as the direct effect (.2549). It was revealed that grade change had the greatest direct influence on female students' academic performance.

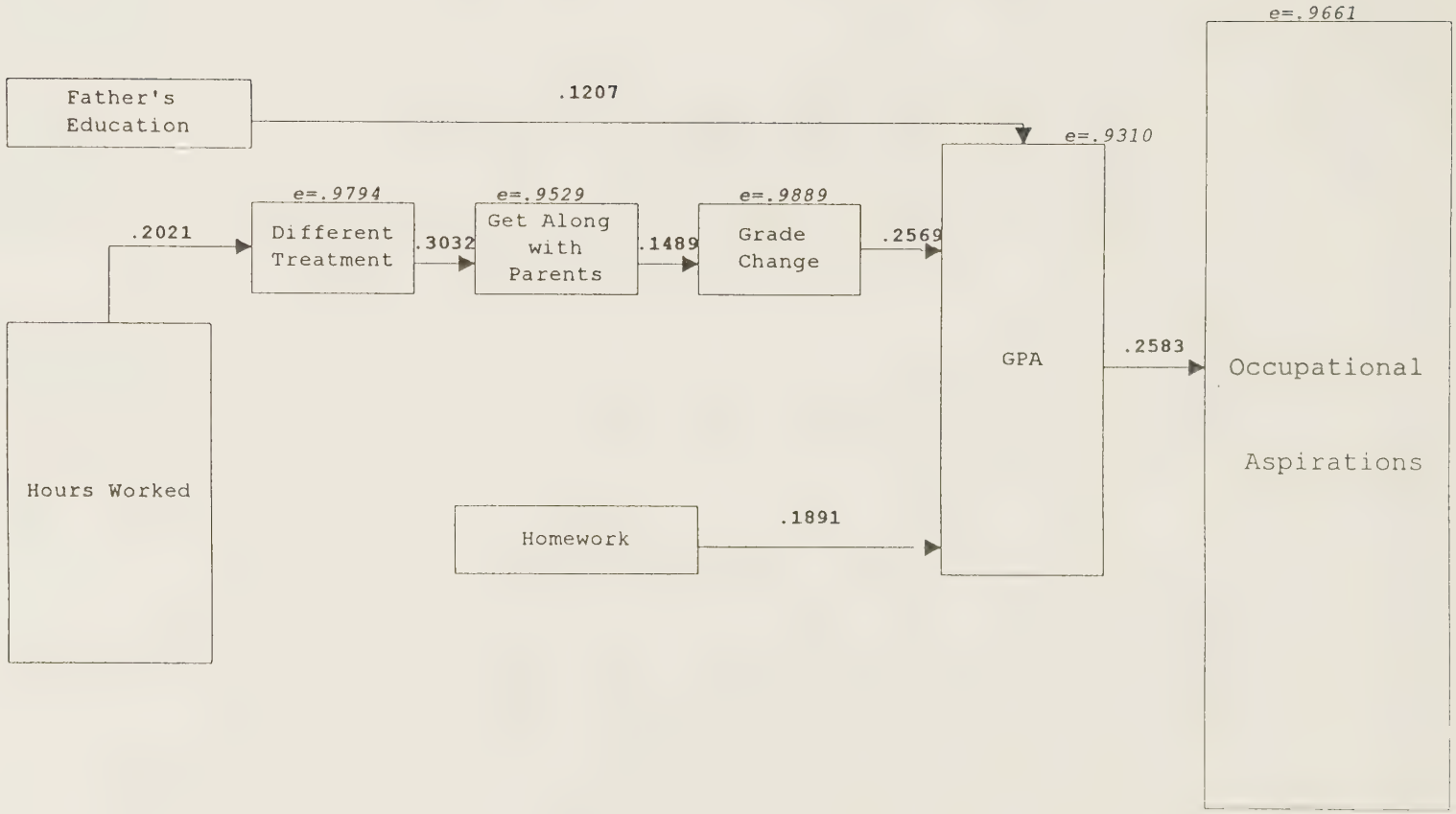


Figure 6. Path Model of Adolescent Occupational Aspirations for Female Students

Table 22

Decomposition Table for the Occupational Aspirations of High School Students: Female Students

Dependent Variables	Independent Variables	Direct Effects	Total Effects
Occupation Aspirations	GPA	.2583	.2583
GPA	Father's Education	.1207	.1207
	Grade Change	.2569	.2569
	Studying Homework	.1891	.1891
Grade Change	Get along Parents	.1489	.1489
Get along Parents	Grade Change	.3032	.3032
Different Treatment	Hours Worked	.2021	.2021

Studying homework was the next influential variable followed by father's education. The number of hours worked positively influenced parents' treatment which gave students more freedom. Different treatment directly influenced the relationship of female high school students with their parents. In addition, the relationship between female students and their parents had a significant direct influence on grade change. The total effect score was .1489.

Male Students Group. The zero order correlations and simple descriptive statistics for the path model variables as they applied to the sample of male students are contained in Table 23. The number of hours of working was not related to reading for pleasure, and therefore was not included in the regression analysis. However, social acceptance was related to reading for pleasure (r=.155) and job characteristics (r=.219); a significant equation showed that they explained 9% of variance.

The correlation matrix showed that occupational aspirations were correlated with all four predictors: father's education (r=.261), mother's occupation (r=.212), social acceptance (r=.207), and GPA (r=.182). When the regression analysis was run, however, GPA was not in the equation (see Table 24). Mother's occupation carried the most weight (B=.1904).

Table 23

Correlation Matrix for All Variables in Revised Model:

Male Students (N=189)

	MOCC	FEDU	GPA	TRET	GETA	GRCH	HRWK	STUY
MOCC								
FEDU	.280**							
GPA	.130*	.191**						
TRET	-.043	-.115*	-.039					
GETA	-.019	-.019	.056	.256**				
GRCH	-.082	-.022	.175**	.033	.111*			
HRWK	-.085	-.118*	-.162**	.175**	.005	-.034		
STUY	.082	.073	.194**	-.017	-.012	.037	-.106*	
ENJY	.031	.146**	.196**	.051	.085	-.007	-.113*	.220**
READ	.077	.102	.069	.004	-.065	.110*	-.078	.285**
JOB	-.061	.053	.062	.050	-.025	.015	.046	-.022
SOCA	-.084	.123*	.091	-.031	.033	-.007	-.002	.110*
ASPR	.212**	.261**	.182**	-.043	-.086	-.129*	-.083	.209**
MEAN	42.73	4.55	4.43	2.78	2.09	2.89	21.98	2.56
STD	21.21	1.44	1.46	.90	.49	.82	10.39	1.07
MIN	9.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MAX	85.00	8.00	7.00	4.00	3.00	5.00	72.00	6.00
RANGE	76.00	7.00	6.00	3.00	2.00	4.00	71.00	5.00

	ENJY	READ	JOB	SOCA	ASPR
READ	.096				
JOB	.107*	.020			
SOCA	.204**	.155**	.219**		
ASPR	.128*	.074	.093	.207**	
MEAN	2.66	2.16	3.45	11.86	54.57
STD	.88	.99	.79	2.68	22.62
MIN	1.00	1.00	1.00	4.00	16.00
MAX	4.00	6.00	4.00	16.00	96.00
RANGE	3.00	5.00	3.00	12.00	80.00

* p <.05 ** p <.01

MOCC = Mother's Occupation
FEDU = Father's Education
GPA =Grade Point Average
TRET =Different Treatment
GETA =Get along Parents
GRCH =Grade Change
HRWK = Hours per Week
STDY =Study Homework
ENJY = Enjoy School
READ =Reading for Pleasure
JOB = Job Characteristic
SOCA = Social Acceptance
ASPR =Occupational Aspiration

Table 24

Relationship of Social Acceptance and Occupational Aspiration with Predictors: Male Students

Independent Variables	Dependent Variables: Social Acceptance b	Social Acceptance B	Occupational Aspirations b	Occupational Aspirations B
Reading for Pleasure	.3544	.1261*		
Job Characteristics	.7214	.2125***		
Father's Education			2.3458	.1542*
Mother's Occupation			.1990	.1904**
Social Acceptance			1.3264	.1597*
Constant	8.6167		20.5000	
Adjusted R Square	.0575		.0880	
F	10.6376***		8.5873***	

* p <.05 ** p <.01 *** p <.001

The path model for male students' occupational aspirations showed that mother's occupation, father's education, and social acceptance directly influenced male students' occupational aspirations. Reading for pleasure and job characteristic had only indirect effect on the criterion variable through social acceptance (see Figure 7).

The decomposition of the effect of these three predictors of occupational aspirations and two predictors of social acceptance is shown in Table 25. The total effects for father's education (.1542) and social acceptance (.1597) approached the degree of influence on the male students' occupational aspirations variable wielded by the mother's occupation (.1904). It was found that job characteristics (B=.2125) had greater direct influence on social acceptance than did social readings (B=.1261).

Even though other variables were not included in the equation to predict male students' occupational aspirations, it was worthwhile to examine some relationships among variables as shown in Table 23. Male students' GPA was significantly affected by the variables of mother's occupation (r=.1298), father's education (r=.1910), grade change (r=.1752), studying homework (r=.1943), and enjoying school (r=.1963). The number of hours of working negatively influenced male students' GPA (r=-.1619) and it was significant. In addition, the number of hours of working were negatively related to father's education (r=-.1176),

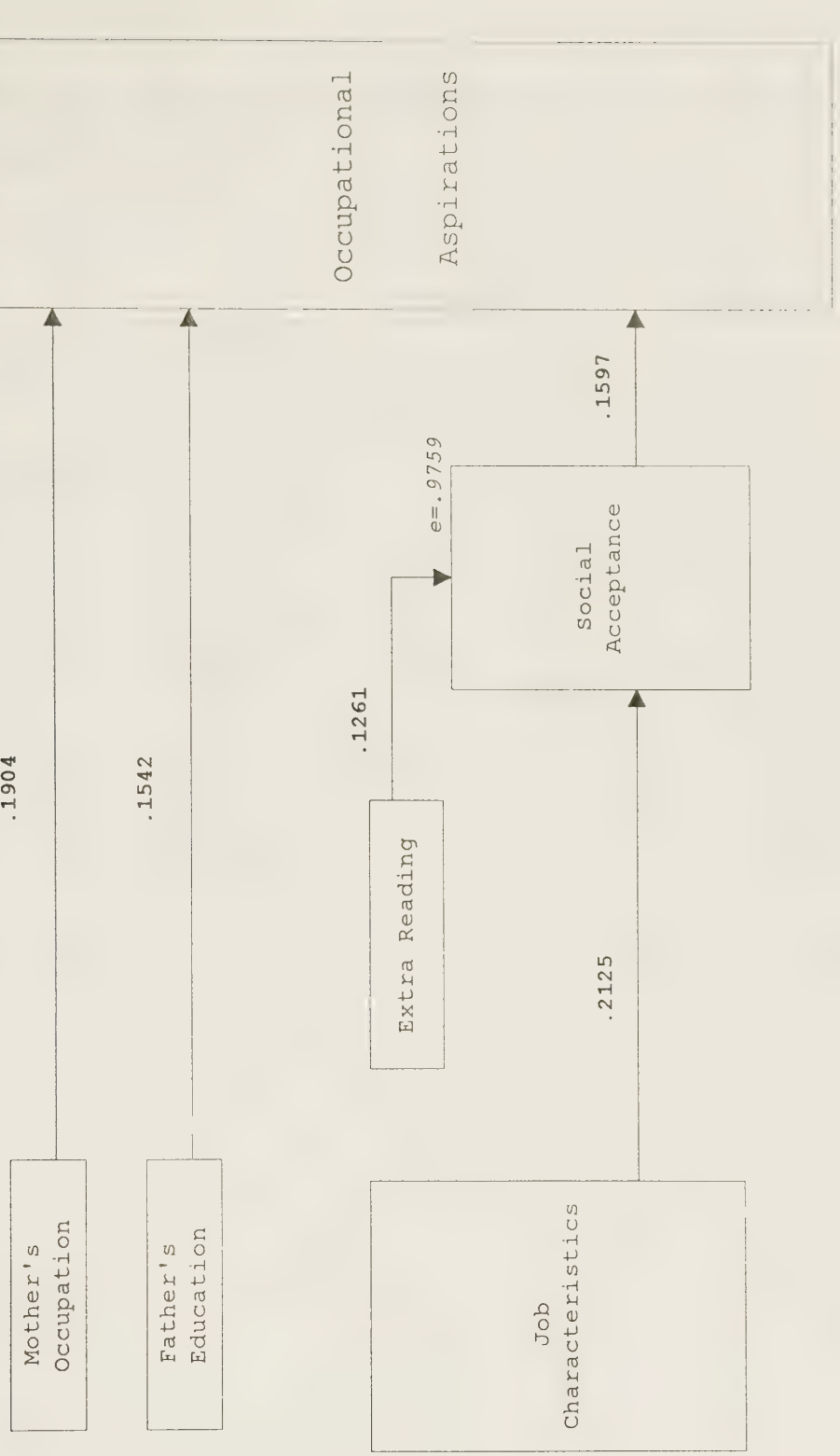


Figure 7. Path Model of Adolescent Occupational Aspirations for Male Students

Table 25

Decomposition Table for the Occupational Aspirations of High School Students: Male Students

Dependent Variables	Independent Variables	Direct Effects	Total Effects
Occupational Aspirations	Mother's Occupation	.1904	.1904
	Social Acceptance	.1597	.1597
	Father's Education	.1542	.1542
Social Acceptance	Job Characteristic	.2125	.2125
	Reading for Pleasure	.1261	.1261

studying homework (r=-.1055), and enjoying school (r=-.1134) at the .05 level of significance. As in the female group, different treatment was strongly related to getting along with parents (r=.2557) and getting along with parents was related to grade change (r=.1114).

Occupational Aspirations by Grade Level

Since more juniors and seniors work and since older students are more likely to be aspiring to an occupation, the model was tested by age. The total sample was divided into two groups: freshman/sophomore and junior/senior.

Freshman and Sophomore Group. The zero order correlations and simple descriptive statistics for the path model variables as they applied to the sample of freshman and sophomore students are contained in Table 26. Mother's occupation (r=.160) and father's occupation (r=.178) are the only family background variables that were directly correlated with freshman and sophomore students' occupational aspirations. In addition, students' academic performance (r=.222) and social acceptance (r=.149) were significantly related to occupational aspiration.

Significantly related to grade point average were father's education (r=.265), the number of hours of working per week (r= -.242), studying homework (r=.255), enjoying school (r=.268), and mother's education (r=.158) were significant variables to predict. The relationship of job characteristics with social acceptance was significant

Table 26

Correlation Matrix for All Variables in Revised Model:

Freshmen and Sophomores (N=138)

	MOCC	FEDU	GPA	TRET	GETA	GRCH	HRWK	STUY
MOCC								
FEDU	.236**							
GPA	.158*	.265**						
TRET	-.088	-.235**	-.187*					
GETA	-.112	-.096	.004	.285**				
GRCH	-.051	.012	.130	-.003	.032			
HRWK	-.159*	-.148*	-.242**	.214**	.019	.041		
STUY	.202**	.142*	.255**	-.058	-.010	.122	-.090	
ENJY	-.071	.174*	.261**	-.064	.049	.025	-.122	.196*
READ	.236**	.094	.123	-.006	-.066	.129	-.147*	.233**
JOB	-.151	.070	.004	-.024	-.164*	-.051	.109	-.072
SOCA	-.078	.107	.165*	-.006	.012	-.028	.044	.075
ASPR	.160*	.178*	.222**	-.084	-.087	.080	-.018	.149
MEAN	42.19	4.40	4.38	2.75	2.12	3.01	18.39	2.64
STD	20.86	1.58	1.49	.89	.52	.82	10.45	1.08
MIN	10.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MAX	83.00	8.00	7.00	4.00	3.00	5.00	72.00	6.00
RANGE	73.00	7.00	6.00	3.00	2.00	4.00	71.00	5.00

	ENJY	READ	JOB	SOCA	ASPR
READ	.056				
JOB	.030	.019			
SOCA	.197*	.121	.158*		
ASPR	.139	.057	.184*	.149*	
MEAN	2.78	2.23	3.42	12.18	53.31
STD	.86	.80	.80	2.85	21.88
MIN	1.00	1.00	1.00	4.00	16.00
MAX	4.00	6.00	4.00	16.00	96.00
RANGE	3.00	5.00	3.00	12.00	80.00

* p <.05 ** p <.01

MOCC = Mother's Occupation
FEDU = Father's Education
GPA =Grade Point Average
TRET =Different Treatment
GETA =Get along Parents
GRCH =Grade Change
HRWK = Hours per Week
STDY =Study Homework
ENJY = Enjoy School
READ =Reading for Pleasure
JOB = Job Characteristic
SOCA = Social Acceptance
ASPR =Occupational Aspiration

(r=.158).

Four regression analyses were run for freshman and sophomore students group using only the variables that were significantly correlated. The following predictors were entered into each equation:

(1) father's education, the number of hours of working, studying homework, and enjoying school were examined as predictors of GPA;

(2) job characteristics was examined as predictors of social acceptance;

(3) mother's occupation, father's education, GPA, and social acceptance were examined as predictors of occupational aspirations.

The results of the regressions for the above relationships are shown in Table 27.

Father's education, studying homework, and enjoying school were significant positive predictors of GPA. In addition, the number of hours of working was retained as a significant negative predictor of GPA. Based on the four predictors, the adjusted R-square was .2310, and the equation was significant.

Even though mother's occupation, father's education and social acceptance were significantly correlated with occupational aspiration for freshmen and sophomores, they did not enter into the equation. Only GPA was retained as a predictor of occupational aspirations for this group. The

Table 27

Predictors of GPA and Occupational Aspiration:

Freshmen and Sophomores

	Dependent Variables			
	GPA		Occupational Aspirations	
Independent Variables	b	B	b	B
Father's Education	.2050	.2127*		
Hours of Working	-.0325	-.2119*		
Study Homework	.3126	.2266*		
Enjoy School	.3458	.1941*		
GPA			3.3967	.2223**
Constant	2.2896		38.6199	
Adjusted R Square	.2310		.0442	
F	13.8441**		9.4091*	

* p <.01 ** p <.001

adjusted R-square was .0442, and the equation was significant.

The path model of occupational aspirations for the younger age group (freshman and sophomore students) is depicted in Figure 8. Father's education and GPA directly influenced students' occupational aspirations. The number of hours of working, studying homework, and enjoying school indirectly influenced occupational aspiration through GPA.

In Table 28, the decomposition of effects revealed more detailed information. It was found that time spent on studying homework had the greatest direct influence on academic performance of freshmen and sophomores. Father's education, the number of hours of working, and enjoying school impacted on academic performance. The total effect for father's education was .2432, for the number of hours of working was -.2119, and for enjoying school was .1941. For freshman and sophomore students' occupational aspirations, students' academic performance was the only variable which influenced.

For freshman and sophomore students, the child-parent relationship did not impact on student's academic performance. Also, the number of hours of working did not influence amount of time spent on studying homework, extra reading, or enjoying school.

Junior and Senior Group. The zero order correlations and simple descriptive statistics for the path model

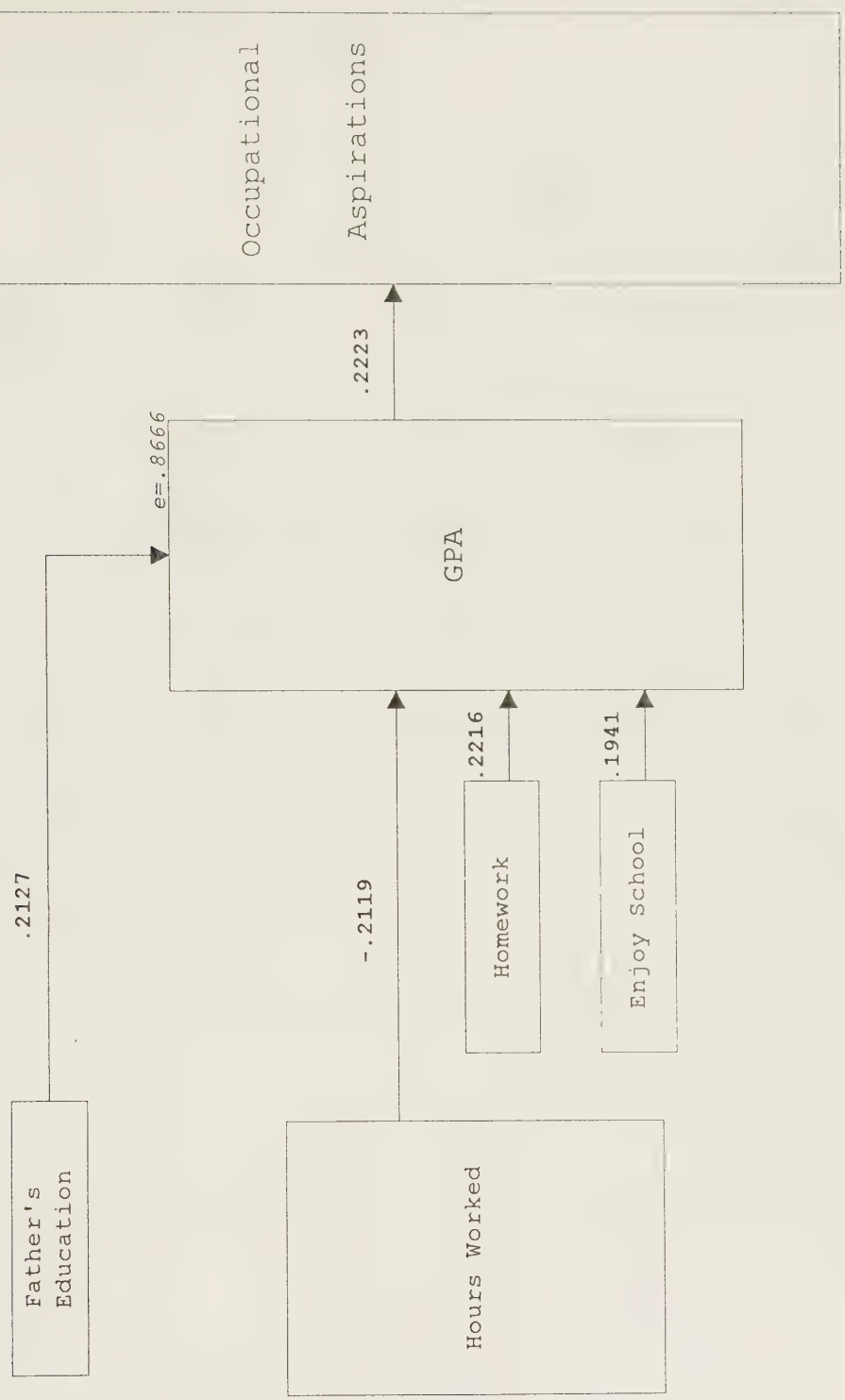


Figure 8. Path Model of Adolescent Occupational Aspirations for Freshmen & Sophomores

Table 28

Decomposition Table for the Occupational Aspirations of High School Students: Freshmen and Sophomores

Dependent Variables	Independent Variables	Direct Effects	Indirect Effects (via) Hr. Work	Total Effects
GPA	Father's Education	.2127	.0305	.2432
	Study Homework	.2266		.2266
	Hours of Working	-.2119		-.2119
	Enjoy School	.1941		.1941
Occupational Aspiration	GPA	.2223		.2223

variables of junior and senior students are contained in Table 29. Family background variables, such as mother's occupation and father's education, were not significantly correlated with junior and senior students' academic performance. However, school commitment variables were all associated with student's GPA. In addition, grade change (r=.280) had a strong relationship with GPA. Getting along with parents (r=.165) was correlated with students' grade change. Getting along with parents was related to parents' different treatment (r=.273).

The number of hours of working was negatively correlated with students' amount of time spent on studying homework (r=-.155). There also was a strong negative relationship between the number of hours of working and extra reading for pleasure (r=-.130). However, the number of hours worked positively correlated with parents' different treatment (r=.162). For occupational aspirations, mother's occupation (r=.186), father's education (r=.227), GPA (r=.212), and social acceptance (r=.160) were strongly related.

From the significant correlations of the variables of interest in the correlation matrix for occupational aspirations of junior and senior students, the following predictors were entered into six equation:

(1) the number of hours worked as a predictor of different treatment;

Table 29

Correlation Matrix for All Variables in Revised Model:

Juniors and Seniors (N=281)

	MOCC	FEDU	GPA	TRET	GETA	GRCH	HRWK	STUY
MOCC								
FEDU	.303**							
GPA	.088	.086						
TRET	-.033	-.029	.031					
GETA	-.071	-.050	.099*	.273**				
GRCH	-.074	-.041	.280**	-.003	.165**			
HRWK	-.019	-.158**	-.172**	.162**	-.006	-.098*		
STUY	.067	.076	.218**	-.045	.004	.046	-.155**	
ENJY	.026	.031	.159**	.083	.076	.088	-.094	.307**
READ	.042	.125*	.061	.008	-.004	.024	-.130**	.236**
JOB	-.009	.022	.124*	.083	.100*	.052	.006	-.010
SOCA	-.080	.098	.126*	-.018	.012	.001	-.145**	.211**
ASPR	.186**	.227**	.212**	.011	.032	-.110*	-.090	.258**
MEAN	42.73	4.53	4.83	2.80	2.06	2.76	22.21	2.68
STD	21.27	1.39	1.39	.89	.48	.82	8.83	1.01
MIN	9.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00
MAX	96.00	8.00	7.00	4.00	3.00	5.00	70.00	6.00
RANGE	87.00	7.00	6.00	3.00	2.00	4.00	68.00	5.00

	ENJY	READ	JOB	SOCA	ASPR
READ	.112*				
JOB	.086	-.033			
SOCA	.234**	.242**	.086		
ASPR	.103*	.015	.024	.160**	
MEAN	2.74	2.24	3.49	12.57	57.79
STD	.85	.99	.73	2.50	21.19
MIN	1.00	1.00	1.00	4.00	16.00
MAX	4.00	6.00	4.00	16.00	96.00
RANGE	3.00	5.00	3.00	12.00	80.00

* p <.05 ** p <.01

MOCC = Mother's Occupation
FEDU = Father's Education
GPA = Grade Point Average
TRET = Different Treatment
GETA = Get along Parents
GRCH = Grade Change
HRWK = Hours per Week
STDY = Study Homework
ENJY = Enjoy School
READ = Reading for Pleasure
JOB = Job Characteristic
SOCA = Social Acceptance
ASPR = Occupational Aspiration

(2) different treatment as a predictor of getting along with parents;

(3) getting along with parents as a predictor of grade change;

(4) the number of hours of working as a predictor of studying homework, enjoying school, and extra reading for pleasure;

(5) extra reading for pleasure as a predictor of social acceptance;

(6) grade change, the number of hours of working, studying homework, and enjoying school as predictors of GPA;

(7) mother's occupation, father's education, GPA, and social acceptance as predictors of occupational aspirations.

As shown in Table 30, the number of hours worked per week turned out to be a significant predictor of parents' different treatment with 2.4% of variance of different treatment explained by hours worked. The equation was significant. When getting along with parents was regressed on different treatment, different treatment was a significant positive predictor of getting along with parents. The adjusted R-square was .073, and the equation was significant (see Table 30). Table 31 shows the relationship of grade change and studying homework with predictors. Getting along with parents was retained as a

Table 30

Predictors of Different Treatment and Get Along with Parents: Juniors and Seniors

	Dependent Variables			
	Different Treatment		Get along With parents	
Independent Variables				
	b	B	b	B
Hours Worked	.0164	.1623*		
Different Treatment			.1477	.2734**
Constant	2.4504		1.6501	
Adjusted R Square	.0240		.0726	
F	11.0688*		33.6189**	

* p <.01 ** p <.001

Table 31

Predictors of Grade Change and Study Homework:

Juniors and Seniors

	Dependent Variables			
	Grade Change		Study Homework	
Independent Variables				
	b	B	b	B
Get along With parents	.2775	.1652**		
Hours of Working			-.0174	-.1548*
Constant	2.1890		3.0565	
Adjusted R Square	.0249		.0216	
F	11.5004**		10.0893*	

* p <.01 ** p <.001

significant predictor of grade change (B=.1652). The number of hours worked was a significant predictor of studying homework and the equation was significant.

When GPA was regressed on the grade change, the number of hours of working, studying homework, and enjoying school, enjoying school was excluded (see Table 32). Among three predictors of GPA, grade change was the strongest independent variable in the equation. The adjusted R-square was .121, and the equation was statistically significant.

When GPA, father's education, mother's occupation, and social acceptance were entered into the equation for predicting occupation aspirations, social acceptance was not retained as a significant predictor of occupational aspirations. The adjusted R-square of the equation which used three predictors was .093, and the equation was significant.

The path model of junior and senior students' occupational aspiration is illustrated in Figure 9. Mother's occupation, father's education, and GPA directly influenced students' occupational aspiration of juniors and seniors. Grade change, the number of hours of working, and studying homework influenced occupational aspiration indirectly through GPA. In addition, different treatment, getting along with parents, and grade change was one path through which grade point average was predicted. The number of hours of working influenced GPA through two paths, one

Table 32

Predictors of GPA and Occupational Aspiration:

Juniors and Seniors

Independent Variables	Dependent Variables: GPA		Dependent Variables: Occupational Aspirations	
	b	B	b	B
Grade Change	.4218	.2490***		
Study Homework	.2556	.1848***		
Hours of Working	-.0193	-.1244**		
GPA			3.1442	.2013***
Father's Education			2.3058	.1577**
Mother's Occupation			.1228	.1253*
Constant	3.4565		26.8952	
Adjusted R Square	.1219		.0933	
F	19.8254***		11.2889***	

* p <.05 ** p <.01 *** p <.001

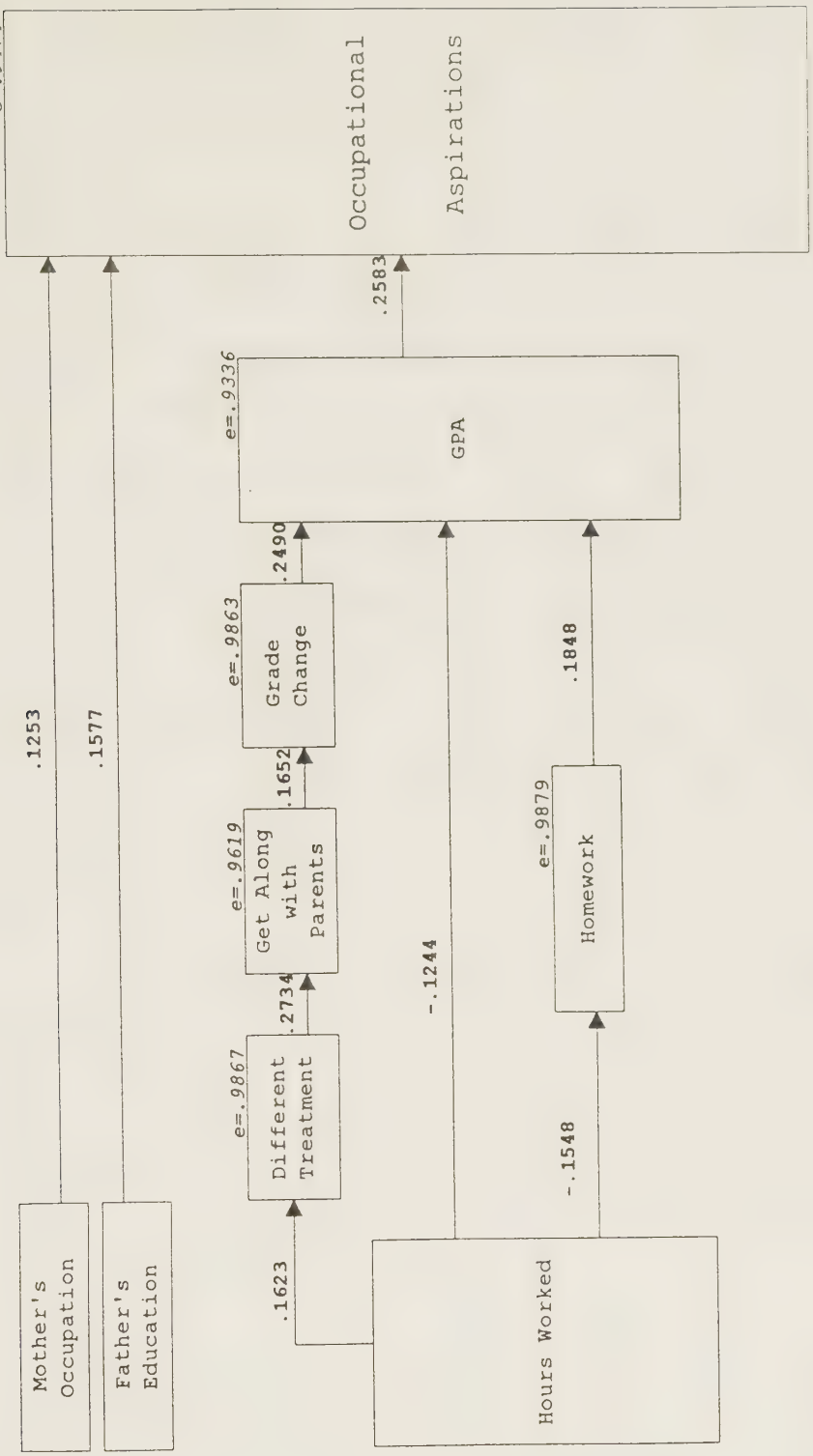


Figure 9. Path Model of Adolescent Occupational Aspirations for Juniors & Seniors

directly and the other through studying homework.

Table 33 shows that the number of hours worked influenced parents' treatment. Different treatments of parents was significant to predict the relationship of juniors and seniors with their parents. Getting along with parents influenced juniors' and seniors' grade change. Time spent on studying homework was influenced by the number of hours of working in the group of juniors and seniors. The score of total effect was -.1548. Grade change had the greatest direct influence on academic performance of juniors and seniors. Time spent on studying homework and the number of hours of working also were other influential variables of academic performance following to grade change. The score of total effect for grade change was .2490, for studying homework was .1848, and for the number of hours of working was -.1530.

The decomposition table also revealed that students' occupational aspirations was influenced by three independent variables: GPA, father's education, and mother's occupation. Among them, GPA had the greatest influence on juniors' and seniors' occupational aspirations. Father's education was followed by mother's occupation.

Discussion

The purpose of this study was to develop a theoretical model to predict high school students' occupational aspirations. The main interest in testing the model was to

Table 33

Decomposition Table for the Occupational Aspirations of high school Students: Juniors and Seniors

Dependent Variables	Independent Variables	Direct Effects	Indirect Effects (via) Study	Total Effects
Occupational Aspirations	GPA	.2013		.2013
	Father's Education	.1577		.1577
	Mother's Occupation	.1253		.1253
GPA	Grade Change	.2490		.2490
	Study Homework	.1848		.1848
	Hours Worked	-.1244	-.0286	-.1530
Different Treatment	Hours Worked	.1623		.1623
Get along Parents	Different Treatment	.2734		.2734
Grade Change	Get along Parents	.1652		.1652
Study Homework	Hours Worked	-.1548		-.1548

examine the influence of family background and academic performance on occupational aspirations for students who are working while going to school.

The findings that father's education was a significant predictor of occupational aspirations supports several former findings (e.g., Caro, 1965; Haller & Portes, 1973; Marini & Greenberger, 1978; Otto, Haller, Meire, & Ohlendorf, 1974; Sewell, Haller, & Straus, 1957, Shapiro & Crowley, 1982). However, the findings that mother's occupation influenced high school students' occupational aspirations were contradictory to the findings of Marini and Greenberger's (1978). Marini and Greenberger reported that mother's occupational prestige maintained a considerably smaller relationship to the construct than did the other three family background indicators-- father's education, father's occupation, and mother's education.

In fact, most previous studies did not include mother's occupation in the family background variables (Haller et al., 1974; Haller & Porters, 1973; Sewell & Hauser, 1975). When mother's occupation was used, it was treated as a dichotomous variable, whether mother was working or not (Corder & Stephan, 1984; Marini, 1972, 1974; Sandberg et al., 1987). Often, only mother's educational status, not mother's occupational status, was used to examine family background (Rosen & Aneshensel, 1978).

When how the number of hours worked per week would impact on school commitment (time spent on homework, time spent on extracurricular activities, school enjoyment, and school absence) was examined, two of these variables had a negative association with time spent working. Increased hours spent in the work place was related to a drop in time spent on homework and a decline in school enjoyment. An examination of the direct effect in the path model showed that studying homework was the most important predictor of academic performance. This result is not surprising, since studying homework has direct consequences for students' academic performance.

The number of work hours did not appear to influence school absence. The findings that there was no relationship between the number of hours worked and school absence did not support Steinberg et al.'s (1978) research outcome. Contrary to their findings that time spent in the work place was related to a drop in time spent on extracurricular involvement, the number of hours of working in this study was not associated with extracurricular activities. However, school commitment variables served as intervening variables between the number of hours of working and academic performance as Steinberg et al. (1982) mentioned. Thus, the number of hours of working was an important predictor of academic performance, both directly and indirectly through two school commitment variables such as

studying homework and school enjoyment.

The number of hours of working also influenced time spent on reading for pleasure for these high school students. The direct influence of the number of hours of working was stronger for extra reading for pleasure than on studying homework and school enjoyment.

When the total effects of academic achievement was compared with family background and work attitudes in the model of predicting occupational aspirations, academic performance was found to have a stronger effect than other variables did. This finding supported previous studies (Duncan, Haller, & Portes, 1968; Hout & Morgan, 1975; Marini & Greenberger, 1978; Sewell & Hauser, 1975) that academic ability had a greater effect than socioeconomic background did. Academic performance was influenced by father's education and occupation and mother's education and occupation in Marini and Greenberger's study (1978). However, only father's education was seen as influencing academic performance in this study.

Although the number of hours of working influenced GPA, the number of hours of working was associated with lower grades. Whereas the number of hours of working directly decreased academic performance, working itself increased academic performance through parent-child relationship. That is, the students responded that after they started to work, the relationship of parents with high school students

improved. Students reported that their parents treated them better than before they worked. This is similar to the finding of Steinberg and Greenberger (1980) who reported that working may affect the development of autonomy through its impact on family relationships. It cannot be claimed that having a part-time job would encourage adolescent students to behave more independently at home, which might cause parents to treat them as responsible persons. However, it could be carefully suggested that working may change the perception of parents toward their teenage children. The significant relationship of parents' different treatment with the number of hours of working may provide supporting evidence that working impacts on better family relationships through encouraging adolescents' autonomy.

Having a better treatment was inherently associated with better relationships with parents, and it was related to a positive grade change. Finally, better relationships with parents was positively related to high school students' higher academic performance. In status attainment theory, parental encouragement actually influences indirectly occupational aspirations based on observing their children's academic performance (Blau & Duncan, 1967; Haller & Portes, 1973; Otto & Haller, 1979; Wilson, 1989). Through the "status indications" procedure in which parents take the children's ability and performance into account, either in

defining or modeling modes, parents do affect their children's occupational aspirations according to status attainment theory.

Rather than focusing on the parents' role on the status indications, it was assumed that parents played roles to encourage the "self-reflexion" process which is the conscious consideration by the students of their own ability and prior performance on school tasks and the possibilities for additional years of schooling (Otto & Haller, 1979). Through the self-reflexion process, children regard their own ability based on school performance and allow themselves to influence their own future planning which is what occupational aspirations are in this study.

Just as Hamilton and Crouter (1980) suggested that early work experience may affect adolescents' work attitudes through the job characteristics, the job characteristic of having a good product or service was important in this study. Believing that a good product or service is provided in the job encourages social responsibility in high school students and was probably the reason that it was an important predictor of the work attitude, social acceptance. The social acceptance work attitude functioned as an important direct predictor of occupational aspirations. It also served as an intervening variable for time spent on readings for pleasure and jobs that have a good product. The present study supported the assumption that the social

acceptance work attitudes would influence high school students' occupational aspirations.

Gender

When the gender differences in high school students' occupational aspirations were examined, it was found that the boys' model showed different paths from those in the girls' model. Whereas father's education indirectly influenced girls' occupational aspirations, father's education and mother's occupation were direct predictors of boys' occupational aspirations. Marini and Greenberger (1978) reported the same tendency that the level of boys' occupational aspirations followed more directly from the resources afforded them by their family background than did the level of the girls. They suggested that these findings could provide the evidence of the major route to status attainment for males. Since men's occupational accomplishment is usually higher than that of women, boys tend to apply their family background resources to achieving their future occupational goals. Girls are less likely to be highly motivated to utilize their family resources since the social value system still restrains girls from achieving higher status in the society.

Although family background did not provide incentive for girls to aspire to occupational achievement, academic performance could be used to encourage girls' motivation for obtaining occupational accomplishment. Academic performance

was the most effective and the only direct predictor of occupational aspirations in the female model. In contrast, GPA was not even in the boys' model. Instead of depending on their family background, girls showed a tendency to rely on their own abilities. This type of result may indicate the struggle of women toward the existing social value system in which higher status occupations are not usually achieved by women. Therefore, women began to learn early in their lives, at least in the adolescent stage, how to show their ability to perform. Academic performance is one of the most important indexes for evaluating abilities. As a meaningful resource, academic performance may have a greater effect on the occupational aspirations of girls than of boys. In addition, other studies have shown that the effect of academic ability is greater than the effect of socioeconomic background for girls (Fortner, 1970; Hout & Morgan, 1975; Sewell et al., 1957).

From a different perspective, the importance of GPA could be considered since girls' academic performance was an intervening variable between father's education and girls' occupational aspirations. The path model suggested that high school girl students who had better academic performance than others did could aspire to future occupational planning since girls have more options or expectations for their future than do boy students. Boys rather have limited options about their future; that is,

they had to hold a job whether they performed well or not in the school.

For girls, studying homework, different treatment by parents, getting along with parents, and grade change influenced both directly and indirectly their academic achievement and indirectly influenced occupational aspirations. Even though family background did not have a significant effect on occupational aspirations for girls, the treatment by parents was still an important factor. Gilligan (1982) discerned in her findings that there are different developmental accomplishments in terms of the relationship based on gender; the findings of this study showed that girls are more concerned about the relationships with others than boys are.

For boys social acceptance work attitude was retained in the model with two predictors of social acceptance, reading for pleasure and the job characteristics. How work attitudes influence occupational aspiration is an unstudied area. Furthermore, how gender intervenes in the relationship between work attitudes and occupational aspirations could not be answered or proved. One can speculate, however, based on the relationship between the number of hours of working and gender. Usually, boys work more hours than girls. When boys work more, they have a better chance to evaluate their job critically. Their positive evaluation of their job would enhance their social

acceptance work attitudes which finally influences occupational aspirations (e.g., generous attitudes toward others who are different from themselves encourage them to achieve higher occupational aspirations).

Grade Levels

Examination of the data for younger students (9th/10th) suggested that academic performance was the only variable directly influencing occupational aspirations. Father's education was retained as a predictor of students' academic performance in the model as a family background influence. In addition, academic performance was influenced by the number of hours of working, studying homework, and school enjoyment. The number of hours of working did not influence studying homework and school enjoyment.

Family background had more influence on older students' (11th/12th) occupational aspirations than on those for younger students. Mother's occupation and father's education were retained in the model of older students. However, Shapiro and Crowley (1982) suggested that the impact of parental education is lower among older youth than among younger youth. They interpreted the findings as evidence that the role model effects of family background weaken as young people grow and develop. In their study, the age range of subjects was from 14 to 22. Therefore, the older youth might be ages between 18 and 22, which is beyond the age of these high school juniors and seniors.

The trends showed that family background directly influenced students' academic performance when students were in the freshman and sophomore years. Family background also directly influenced students' occupational aspiration. When children were getting close to the age of decision making about their future, parents were more concerned about their children's future planning rather than about the children's immediate environment, school and related performance, especially academic performance.

Parent-child relationship also has a greater effect on occupational aspirations for older students than for younger students. Those findings support the idea that the role of parents and family background are not decreased while children grow and develop.

For older students, GPA was influenced by father's education, parent-child relationship, the number of hours of working, and studying homework. Especially, the number of hours of working influenced negatively students' time spent on studying homework. Work attitudes were not retained in the equation for either grade level for females.

In summary, the theoretical model was basically intact after it was tested on a group of high school students. Family background, the number of hours worked, and academic achievement remained as significant predictors of levels of occupational aspirations for the group as a whole. The pattern of paths did vary by gender and by grade level, but

the integrity of the model held.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This research focused on path modeling efforts designed to examine causal connections among variables which were theorized to influence occupational aspirations. Variables were selected which were shown in previous studies to influence adolescents' occupational aspirations. The causal path of occupational aspirations in most past research focused on family background influence. In this present study, which used Shoffner's (1988) data from a larger research project about rural North Carolina adolescents, high school students who worked part-time were studied under the assumption that number of hours of work per week would change the importance of the impact of selected variables on occupational aspirations. A theoretical path model was developed and tested.

Summary and Conclusions

The main interest of this present study was to examine the influence of family background and work experience on high school students' occupational aspirations. The path modeling efforts of Blau and Duncan (1967) and Sewell et al. (1969) and previous studies about part-time work influenced by Steinberg et al. (1982) were the basis of the initial theoretical path model. The relationships among variables

in this initial were examined in a series of multiple regression analyses. The theoretical path model was tested on 381 high school students. Later, this model was tested by gender (169 females and 189 males) and grade level (138 in 9th/10th and 281 in 11th/12th).

The model, developed from theory and previous research, included three exogenous variables, several mediating variables, and one dependent variable (see Figure 3). The three exogenous variables were family background, the number of hours worked, and job characteristics. Father's education and occupation and mother's education and occupation were the selected variables for family background. Work experience was operationalized as the number of hours worked per week. Job characteristic described the value of the service or product to society. These three exogenous variables influenced occupational aspirations either directly or indirectly. The major intervening variable for family background and hours worked was the level of academic achievement (GPA). The main intervening variable between job characteristics and occupational aspirations was work attitudes. The dependent (endogenous) variable was the level of occupational aspirations.

The way these exogenous and intervening variables operated in the path model is described below. Family background variables influenced occupational aspirations

directly and indirectly through academic achievement. The number of hours worked per week also influenced absences as well as time spent on studying homework, participating in extracurricular activities, reading for pleasure, and enjoying school. These variables then influenced academic achievement. Work experience also was assumed to change the relationship between high school students and their parents through the parents' changing their treatment of their children. This change initiated improving a better relationship between parents and children and served the role of improving academic performance when the students worked. In addition, reading for pleasure influenced students' work related attitudes: work and ethics, self reliance, and social acceptance. Job characteristics impacted on the above students' work related attitudes. Figure 5 shows the resulting model after it was tested on the 381 high school students.

The results of testing the model on the whole group indicated that mother's occupation, father's education, students' academic performance, and the social acceptance work attitude were significant direct positive predictors of high school students' occupational aspirations. Academic performance was the strongest significant variable among these four variables in predicting occupational aspirations. Students' academic performance was directly and positively influenced by four predictors including father's education,

grade change, time spent in studying homework, and enjoying school. Time spent in reading for pleasure and job characteristics were significant positive predictors of the social acceptance work attitude. As expected, the number of hours of working was a negative influence on students' time spent in studying homework and reading for pleasure and on enjoying school. However, the higher number of hours worked per week encouraged parents' better treatment of their children. The parents' better treatment positively influenced the students' relationship with their parents, and this better parent-child relationship impacted students' grade change after they started to work.

The path model was different when tested for males and females (see Figures 6 & 7). The major difference was that academic achievement was not a predictor for level of boys' occupational aspirations even though it was for girls' aspirations. Mother's occupation and father's education had positive direct effects on the occupational aspirations of boys. Only father's education influenced occupational aspirations of girls, but that was indirectly through girls' academic performance. The number of hours worked entered the model for girls, but not for boys. When girls started to work, their relationship with their parents improved, and they studied more which showed as a positive influence on academic achievement. Time spent on doing homework also influenced girls' academic achievement. Boys, but not

girls, were influenced by the job characteristics and reading for pleasure, a fact which indirectly influenced occupational aspirations through the work attitudes of social acceptance. These differences between boys and girls may be interpreted by the fact that males are traditionally socialized to strive for higher occupational levels according to their parents' expectations. Girls are encouraged to aspire to higher levels of occupation mainly through their academic achievement.

The path model was also different for freshmen/sophomore and junior/senior students (see Figure 8 & 9). For younger students, only academic performance directly influenced their occupational aspirations just as it did for females of all grade levels. Academic performance also directly influenced junior and senior students' level of occupational aspiration, but mother's occupation and father's education also directly predicted their aspirations. Four significant predictors of freshman and sophomore students' academic performance were found: father's education, the number of hours worked, time spent on studying homework, and enjoying school. Only two of those four variables directly influenced academic performance in the junior and senior students' path model: the number of hours of working and spent time on studying homework. Among four predictors, only hours worked was a predictor which had a negative score. In addition to these

two variables for older students, grade change was added as a significant predictor of academic performance. More hours of working decreased academic performance for both older and younger students, because less time was spent on studying homework, especially for older students. In addition, the number of hours worked positively influenced parents' better treatment of older students. When parent-child relationships improved, academic achievement improved in the path model of older students. That GPA was the most important variable for younger students' level of occupational aspirations may reflect the fact that school more than family background is uppermost in their way of thinking about the future.

These findings suggested several conclusions about high school students' process of acquiring occupational aspirations. One conclusion was that whereas students' academic performance played a significant role in predicting the whole group of high school students' occupational aspirations, it was more likely that the female students were the one's responsible.

Another conclusion is that family background variables are important for influencing students' occupational aspirations. In this present study, mother's occupation and father's education were retained in the overall path model as significant predictors of occupational aspirations. However, different influences of family background variables

were found by gender. Both mother's occupation and father's education were meaningful in predicting male and older students' occupational aspirations; whereas female and freshman and sophomore students' occupational aspirations, only father's education influenced occupational aspirations, and that influence was indirect through students' academic performance. These findings suggested that parents still play an important role in encouraging their high school-aged children's future occupational aspirations, but the role of parents differs for children's gender and age.

The effects for such variables as part-time work experience, job characteristics, and work attitudes on high school students' occupational aspirations were expected. Although the work attitude of social acceptance was included in the revised path model for the whole group and male students, it was not profound for the path model of any other subgroup--female, younger, and older students. Part-time work experience played a role in occupational aspirations by influencing students' academic performance through time spent on studying homework and reading for pleasure. Also, job characteristics influenced occupational aspirations through a change in work attitudes.

Whereas the variable of the number of hours of working was negatively related to the variables of school commitments and work attitudes, the number of hours worked positively influenced a change in parents' treatment of

their adolescent children in a better way. This better relationship, emerging after adolescents began working, may be one way that working makes students want to get better grades. This finding was especially true for older students and females. Thus, students' hours of working may play a major role in changing parents' appreciation of teenage children's changing roles and status in the social system.

The work-related attitudes held by these adolescents are not clearly associated with their occupational aspirations yet. Even though the work attitude of social acceptance was included in the path model of occupational aspirations for the whole and for male students, it was not a significant predictor in the model for females.

Finally, one of the most important conclusions to be drawn from this present study is that the findings of family background and part-time experience are not consistent with reports of previous studies. The fact is that very few other studies were found which showed the influence of high school students' part-time work experience on occupational aspirations. Also, these previous studies provided limited findings of how part-time work experience influenced adolescents' future occupational planning.

Recommendations

Since this study used adolescents from rural North Carolina, there were some limitations to generalizing the findings to the general population of high school students.

In fact, research on urban, ethnic, and regional groups is needed. In addition, it would be very enlightening to compare American with Asian and European cultures.

Also, there are other important variables that may influence high school students' occupational aspirations such as students' future educational plans and teacher's and peer groups' encouragement. Girls' expectations of marriage and plans to hold jobs after having children should be assessed. In addition, further exploration needs to be made regarding the differential impact of parents' marital status and the impact of parents' divorce.

Different indices of work experience besides number of hours worked per week, should be considered. Such variables might include more dimensions of high school students' work experience than were incorporated in the present study. For example, information on the students' relationship with their coworkers and employers was not examined. Also, whether students were satisfied with the job they held as part-time workers would provide a meaningful information. These variables might provide more insight into the condition of adolescents' employment.

Likewise, researchers should explore a more extensive scale for measuring work-related attitudes. Clifford (1992) suggested the development of additional factors such as respect for authority figures. Also, there seems to be a need for a more empirical study about the roles that work

attitudes serve for high school students' occupational development.

A scale for high school students' occupational aspirations could suggest several alternatives to be considered for future research. One area which needs additional research involves the categorization and measurement of occupations. The most recent scale for measuring occupational prestige was constructed in the 1950's (Duncan, 1961). The work arena may be considerably different for today's youth since the range of jobs available has expanded considerably in the last 30 years.

The data used in the present study were based on a questionnaire which is a structured self-report method. It would improve the reliance of the findings if GPA were obtained from the official record of the school instead of using students' self-report data about their own GPA. Interviews with the students, their teachers, and their parents would enhance knowledge in this area, especially for theory building. Conducting interviews with both the adolescents and their parents would increase the possibilities for understanding the socialization of high school students' occupational aspirations. Interviews with educators would provide further information about the school environment of high school students.

It might be worthwhile if the model were tested on two random halves the whole working students. In the present

study, it was not possible because of small number of subjects. If the model were tested based on one half of the group of the subjects first and then tested on the other group, there might be more confidence in the outcome of the path model. In addition, the subjects of this present study included a greater number of seniors and male students. Therefore, the revised model might be more representative of seniors and male students rather than the whole group of high school students. More consideration about an even proportion of subjects might be required for further research.

Findings from the present study indicated that a large portion of variability in occupational aspirations is still unexplained. Thus, the need to develop better instruments for measuring existing variables and to incorporate new variables is important. With a better selection of variables and better measurement techniques, future research might focus on more sophisticated multivariate techniques in delineating the occupational development process.

This field of research has significant implications for educational practice in schools as well as for parents, family counseling, and school and social policy. The importance of the role of family background, part-time work experience, and students' academic performance should not be overlooked or underestimated. It is clear that these factors do influence the level of rural high school

students' occupational aspirations. More research should be focused on the practical implications of providing parents with valuable information about the parent-child relationship, since it influences their teenage children's academic achievement and occupational aspirations.

There is a need for school counselors to use the findings of the present study to put more emphasis on the negative relationship between the number of hours of working and academic performance and the positive relationship between academic performance and level of occupational aspirations. This study gives school counselors support for encouraging high school students to be sensitive to the role of their academic performance in planning for their future occupational attainment. In addition, school and social policy could be established regulating the quality of and the quantity of hours spent in the part-time job.

BIBLIOGRAPHY

Bachman, J. G., Bare, D. E., & Frankie, E. I. (1986). Correlates of employment among high school seniors. (Monitoring the Future Occasional Paper 20). Ann Arbor, MI: Institute for Social Research (ERIC Document REproduction Service No. ED 288 145).

Banducci, R. (1967). The effect of mother's employment on the achievement, aspirations, and expectations of the child. Personnel and Guidance Journal, 46, 263-267.

Bateman, R. (1950). The effect of work experience on high school students' scholastic achievement. Occupations, 41, 129-148.

Behn, W. H., Carnoy, M., Carter, M. A., Carin, J. C., & levin, H. M. (1974). School is bad: Work is worse. School Review, 83, 49-68.

Betz, N. E., & Fitzgerald, L. F. (1987). The career psychology of women. Orlando, FL: Academic Press.

Blau, P. M., & Duncan, O. D. (1967). The American occupational structure. New York: Wiley.

Bowles, S, & Gintis, H. (1976). Schooling in capitalist America. New York: Basic.

Brim, O. G., Jr. (1966). Socialization through the life cycle. In O. G. Brim, Jr. and S. Wheeler, Socialization after childhood. New York: John Wiley & Sons, Inc.

Bucknam, R. B. (1976). The impact of EBCE: An evaluator's viewpoint. Career Educational Journal, 33, 32-37.

Carnegie Commission on Policy Studies in Higher Education (1980). Giving youth a better change. San Francisco: Jossey-Bass.

Caro, F. G. 91965). Aspirations and expectations: A reexamination of the bases of social class differences in the occupational orientations of male high school students. Sociology and Social Research, 49, 465-475.

Clifford, D. M. (1992). Gender-based differences in high school employment:Is there differential socialization for work? Unpublished doctoral dissertation, The University of North Carolina at Greensboro.

D'Amico, R. (1984). Does employment during high school impair academic progress? Sociology of Education, 57, 152-164.

Duncan, O. D. (1961). Socioeconomic Index for all occupations. In A. J. Reiss, (Ed.) Occupations and social status. New York: Free Press.

Elder, G. H. (1974). Children of the great depression. Chicago, ILL: University of Chicago Press.

Farmer, H. S. (1983). Career and homemaking plans for high school youth. Journal of Counseling Psychology, 30, 40-45.

Fortner, M. L. (1970). Vocational choices of high school girls: Can they be predicted? Vocational Guidance Quarterly, 18, 203-206.

Garrison, H. H. (1979). Gender differences in the career aspirations of high school seniors. Social Problems, 27, 170-185.

Gerstein, M., Lichtman, M., & Barokos, J. (1988). Occupational plans of adolescent women compared to men: A cross-sectional examination. Career Development Quarterly, 36, 222-230.

Gordon, M. M. (1978). Human nature, class, and ethnicity. New York: Oxford University Press.

Goslen, M. A. (1989). High school employment experience and work related attitudes of college students. Unpublished doctoral dissertation, The University of North Carolina at Greensboro.

Gottfredson, L. S. (1981). Circumscription and compromise: A development theory of occupational aspirations. Journal of Counseling Psychology, 28, 545-579.

Gottfredson, L. S., & Becker, H. J. (1981). A challenge to vocational psychology: How important are aspirations in determining male career development? Journal of Vocational Behavior, 18, 121-137.

Greenberger, E., Josselson, R., Knerr, C., & Knerr, B. (1975). The measurement and structure of psychosocial maturity. Journal of Youth and Adolescence, 4, 127-143.

Greenberger, E., & Steinberg, L. (1986). When teenagers work: The psychological and social costs of adolescent employment. New York: Basic Books.

Greenberger, E., & Steinberg, L. (1981). The workplace as a context for the socialization of youth. Journal of Youth and Adolescence, 10, 185-210.

Haller, A. O., Otto, L. B., meier, R. F., & Ohlendorf, G. W. (1974). Level of occupational aspirations: An empirical analysis. American Sociological Review, 39, 113-121.

Haller, A. O., & Portes, A. (1973). Status attainment processes. Sociology of Education, 46, 51-91.

Hamilton, S. F., & Crouter, A. C. (1980). Work and growth: A review of research on the impact of work experience on adolescent development. Journal of Youth and Adolescence, 9, 323-338.

Hamilton, S. F., & Steward, S. K. (1980). A multi-method approach to research on youth employment programs: A case study of the youth conservation corps. Children and Youth Services Review, 2, 185-208.

Hammond, W. A. (1971). Part-time student employment: A positive view. NASSP Bulletin, 63-70.

Hannah, J. S., & Kahn, S. E. (1989). The relationship of socioeconomic status and gender to the occupational choices of grade 12 students. Journal of Vocational Behavior, 34, 161-178.

Harvey, M. G., & Kerin, R. A. (1978). The influence of social stratification and age on occupational aspirations of adolescents. Journal of Educational Research, 71, 262-266.

Hotchkiss, L. (1986). Work and schools: Complements or competitors? In K. Borman & J. Reisman, (Eds.), Becoming a worker, Norwood, NJ.: Ablex.

Hout, M., & Morgan, W. R. (1975). Race and sex variations in the causes of the expected attainments of high school seniors. American Journal of Sociology, 81, 364-394.

Howell, F. M., & Frese, W. (1982). Making life plans: Race, gender and career decisions. Washington, D.C: University Press of America.

Kerckhoff, A. C. (1972). Socialization and social class. Englewood Cliffs, NJ: Prentice-Hall.

Kerckhoff, A. C., & Campbell, R. T. (1977). Race and social status differences in the explanation of educational ambition. Social Forces, 55, 701-714.

Kohn, M. L., & Schooler, C. (1973). Occupational experience and psychological functioning: An assessment of reciprocal effects. American Sociological Review, 38, 97-118.

Krumboltz, J. D. (1981). A social learning theory of career selection. In D. H. Montross & C. J. Shinkman (eds.), Career development in the 1980s: Theory and practice. Springfield, Ill: Charles C. Thomas.

Leibowitz, A. (1974). Education and home production. American Economic Review, 64, 243-50.

Leibowitz, A. (1977). Parental inputs and children's achievement. Journal of Human Resources, 12, 242-251.

Leslie, L. A. (1986). The impact of adolescent females' assessments of parenthood and employment on plans for the future. Journal of Youth and Adolescence, 15, 29-49.

Lewin-Epstein, N. (1981). Youth employment during high school. Washington, D.C.: National Center for Education Statistics.

Little, J. K. (1957). A statewide inquire into decisions of youth about education beyond high school. Madison: School of Education, University of Wisconsin.

Mangum, G., & Walsch, J. (1977). Employment and training programs for youth: What works best for whom? U. S. Department of Labor, Washington, D.C.: U. S. Government Printing Office.

Marini, M. (1978). Sex differences in the determination of adolescent aspirations: A review of the research. Sex Roles, 4, 723-753.

Marini, M. M. & Greenberger, E. (1978). Sex differences in occupational aspirations and expectations. Sociology of Work and Occupations, 5, 147-178.

Marjoribanks, K. (1985). School attitudes and adolescents' aspirations: Ethnic group differences. International Journal of Psychology, 20, 277-289.

Marjoribanks, K. (1989). Ethnicity, ability, aspirations and social status attainment. International Journal of Psychology, 24, 35-42.

Marjoribanks, K. (1991). Adolescents' learning environments and aspirations: Ethnic, gender, and social-status group differences. perceptual and Motor Skills, 72, 823-830.

Miller, D., & Form, W. (1951). Industrial sociology. New York: Harper.

Mortimer, J. T., & Finch, M. D. (1986). The effects of part-time work on adolescent self-concept and achievement. In K. Borman and J. Reisman, (Eds.), Becoming a worker, Norwood, NJ: Ablex.

Mortimer, J. T., & London, J. (1984). The varying linkages of work and family. In P. Voydanoff (Ed.), Work and family, Palo Alto, Calif: Mayfield Publishing Co.

National Commission on Youth (1980). The transition of youth to adulthood: A bridge too long. Boulder, Colo.: Westview Press.

National Panel on High School and Adolescent Education (1976). The education of adolescents. Washington, D.C.: U.S. Government Printing Office.

The North Carolina State Government Abstracts (1984). Urban and rural distribution of the population of North Carolina Counties (Years 1950, 1960, 1970, 1980). Raleigh, N.C.: Office of State Budget and Management, Research and Planning Services, pp. 15-17 (Table 8).

Otto, L. B., & Haller, A. O. (1979). Evidence for a social psychological view of the status attainment process: Four studies compared. Social Forces, 57, 887-914.

Otto, L. B., Haller, A. O., Meier, R. F., & Ohlendorf, G. W. (1974). An empirical evaluation of a scale to measure occupational aspiration level. Journal of Vocational Behavior, 5, 1-11.

Pedhazur, E. J. (1982). Multiple regression in behavioral research: Explanation and prediction. Fort Worth, Texas: Holt, Rinehart and Winston.

President's Science Advisory Committee, Panel on Youth (1973). Youth: Transition to adulthood. Chicago: University of Chicago Press.

Proctor, C. (1974). Methodology for the baseline study. In Influences on occupational goals of young people in three Southern subcultures (Southern Regional Research Project S-63). Greensboro: University of North Carolina.

Reitzes, D. C., & Mutran, E. (1980). Significant others and self-conceptions: Factors influencing educational expectations and academic performance. Sociology of Education, 53, 21-32.

Rosen, B. C., & Aneshensel, C. s. (1978). Sex differences in the educational-occupational expectation precess. Social Forces, 57, 164-186.

Sandberg, D. E., Ehrhardt, A. A., Ince, S. E., & Meyer-Bahlburg, H. F. (1991). Gender differences in children's and adolescents' career aspirations: A follow-up study. Journal of Adolescent Research, 6, 371-386.

Sandberg, D. E., Ehrhardt, A. A., Mellins, C. S., Ince, S. E., & Meyer-Bahlburg, H. F. L. (1987). The influence of individual and family characteristics upon career aspirations of girls during childhood and adolescence. Sex Roles, 16, 649-668.

Schill, W. J., McCartin, R., & Meyer, K. (1985). Youth employment: Its relationship to academic and family variables. Journal of Vocational Behavior, 26, 155-163.

Schulenberg, J., Goldstine, A. E., Vondracek, F. W. (1991). Gender differences in adolescents' career interests: Beyond main effects. Journal of Research on Adolescence, 1, 37-61.

Sewell, H. W., Haller, A. O., & Straus, M. A. (1957). Social status and educational and occupational aspirations. American Sociological Review, 22, 67-73.

Sewell, W. H., & Hauser, R. M. (1975). Education, occupation, and earnings. New York: Academic Press.

Shapiro, D., & Crowley, J. E. (1982). Aspirations and expectations of youth in the United States, part 2: Employment activity. Youth and Society, 14, 33-58.

Shoffner, S. M. (1988). Rural adolescent employment, academic achievement, psychological maturity, and occupational aspirations. North Carolina Agricultural Research Services Project 16076. Raleigh: North Carolina State University, Project Outline.

Sinclair, K. E., Crouth, B., & Miller, J. (1977). Occupational choices of Sydney teenagers: Relationships with sex, social class, grade level and parent expectations. Australian Journal of Education, 21, 41-55.

Steinberg, L. D., & Greenberger, E. (1980). The part-time employment of high school students: A research agenda. Children and Youth Service Review, 2, 159-183.

Steinberg, L. D., Greenberger, E., Garduque, L., & McAuliffe, S. (1982). High school students in the labor force. Educational Evaluation and Policy Analysis, 4, 363-372.

Steinberg, L. D., Greenberger, E., Garduque, L., Ruggiero, M., & Vaux, A. (1982). Effects of working on adolescent development. Developmental Psychology, 18, 385-395.

Steinberg, L. D., Greenberger, E., Vaux, A., & Ruggiero, M. (1981). Early work experience: Effects on adolescent occupational socialization. Youth and Society, 12, 403-422.

Stern, D., McMillion, M., Hopkins, C., & Stone, J. R. III. (1990). Work experience for students in high school and college. Youth and Society, 21, 355-389.

Straus, M., & Holmberg, K. (1968). Part-time employment, social class, and achievement in high school. Sociology and Social Research, 52, 224-230.

Super, D. E. (1953). A theory of vocational development. American Psychologist, 8, 185-190.

Super, D. E. (1957). The psychology of careers. New York: Harper & Row.

Super, D. E. (1968). The work values inventory, Boston: Houghton-Mifflin.

Super, D. E. (1981). A developmental theory: Implementing a self-concept. In D.H. Montros & C.J. Shinkman (Eds.), Career development in the 1980s: Theory and practice (pp. 28-42). Springfield, Il: Charles C. Thomas.

Van den Daele, L. (1968). A developmental study of ego-ideal. Genetic Psychology Monographs, 78, 191-256.

Vondracek, F. W., Lerner, R. M., & Schulenberg, J. E. (1986). Career development: A life-span developmental approach. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Werner, E. E. (1989). Adolescents and work: A longitudinal perspective on gender and cultural variability. In D. Stern, & D. Eichorn (Eds.), Adolescence and work: Influences of social structure, labor markets, and culture. Hillsdale, NJ: Lawrence Erlbaum.

Work-Education Consortium (1978). Work and service experience for youth. Washington, D.C.: National Manpower Institute.

APPENDIX

HIGH SCHOOL YOUTH EMPLOYMENT, EDUCATION, AND ATTITUDES QUESTIONNAIRE

This is a study about the experiences of high school students, their employment, their education, and their attitudes. You can contribute to our knowledge about this area through your thoughtful participation in this research study.

Please write your name on this page but not on any other page of the questionnaire. This page will be removed and the questionnaire assigned a code number so that your answers will be completely confidential. Please answer as accurately and as honestly as you can.

Your cooperation is voluntary and you may withdraw at any time. Choosing not to participate will not affect your grades. However, the usefulness of this research depends on our obtaining complete answers from as many students as possible, so we hope you will answer each question. We want to include your questionnaire in the study.

As you are answering the questions, you may run into some that you are not quite sure how to answer. Please answer as best as you can and write any clarifying comments in the margin of the questionnaire. (You may be instructed to skip certain parts of the questionnaire that do not apply to you.)

We hope that you will choose to participate. Thank you for your help with this research.

I have read the above information about the questionnaire procedure and agree to participate voluntarily in this study.

_____
Print your name

_____
School

_____
Home address

_____

(_____)_____
Telephone number

____ Please check if you would like to receive a copy of the results of the study.

SECTION I. DEMOGRAPHIC INFORMATION

1. **How old are you?** _____ **(Date of Birth** _____)
(mo) (year)

FOR THE FOLLOWING ITEMS, PLEASE CIRCLE THE NUMBER THAT APPLIES TO YOU:

2. **Sex**
   1 Female
   2 Male

3. **Ethnic group/race**
   1 White
   2 Black
   3 Native American
   4 Hispanic
   5 Asian
   6 Other (please specify) _____

4. **Class**
   1 Freshman
   2 Sophomore
   3 Junior
   4 Senior
   5 Other (please specify) _____

5. **Marital status**
   1 Never married
   2 Engaged
   3 Married
   4 Separated
   5 Divorced
   6 Widowed

6. **Please circle the number beside the highest grade or educational level completed by each of your parents.**

	a. FATHER		b. MOTHER
Less than 7th grade	1	.....	1
Junior high school	2	.....	2
Partial high school	3	.....	3
High school graduate or equivalent	4	.....	4
Some college or specialized training	5	.....	5
Two-year associate degree	6	.....	6
College graduate	7	.....	7
Graduate degree	8	.....	8

7. **What is your father's usual occupation? (If retired, currently unemployed, or deceased, what was his occupation prior to that?)**

   Kind of work, company or business, title, etc. (If self-employed, include type of work):

   _____

   _____

   _____

8. **What is your mother's usual occupation? (If retired, currently unemployed, or deceased, what was her occupation prior to that?)**

Kind of work, company or business, title, etc. (If self-employed, include type of work):

_____

_____

_____

9. **What is your parents' marital status?**

1 Married

2 Father deceased

3 Mother deceased

4 Separated

5 Divorced IF DIVORCED:
5a. Which parent has provided major support for you?

1 Mother

2 Father

6 Other -- Please explain _____

10. **What is the income range that applies to your parents' combined average yearly income (before taxes)?** If your parents' marital status is "married", give average total income. Otherwise, give income of parent primarily responsible for your support. Please estimate if you're not sure. Remember, your answer will be confidential. (PLEASE CIRCLE ONLY ONE ANSWER)

1	Less than $10,000	6	$50,000 - $59,000
2	$10,000 - $19,999	7	$60,000 - $69,999
3	$20,000 - $29,999	8	$70,000 - $79,999
4	$30,000 - $39,999	9	$80,000 or over
5	$40,000 - $49,999		

11. **In what type of area do you live?**

1 Rural nonfarm (in the country, not on a farm)

2 Rural farm (on a farm)

3 Small town or community (less than 2,500 population)

SECTION II. HIGH SCHOOL EMPLOYMENT

12. Do you hold a part-time job on a regular, weekly basis at the present time?

1 Yes

2 No

IF YES: 12a. How did you get your job?

_____

IF YES: 12b. Does your job relate to school in any way (ICT; provides school credit; includes supervision, etc.)?

1 Yes (describe _____

_____

2 No

13. Have you been employed for pay during any school year while in high school? (CIRCLE ALL THAT APPLY)

1 Never

2 Only in the Summer – **Skip to Qestion 13 c**

3 12th Grade

4 11th Grade

5 10th Grade

6 9th Grade

IF YOU HAVE WORKED during any of these school years, Skip to Question 14

IF NEVER WORKED:

13a. Would you like to have a job?

1 Yes

2 No

13b. Are you looking for a job now?

1 Yes

2 No

Continue to 13c, next page

IF NEVER WORKED (or summer-only):

13c. What is the main reason you didn't work during the school year? Circle only one answer and put a "1" in the blank beside it)

_____ 1 I didn't need the money.

_____ 2 The type job I wanted wasn't available.

_____ 3 I couldn't find a job.

_____ 4 My parents wouldn't let me work.

_____ 5 The idea of working didn't really interest me.

_____ 6 It would have taken too much time away from schoolwork and studying.

_____ 7 It would have taken up too much of my free time.

_____ 8 I didn't have transportation.

_____ 9 I wanted to play sports.

_____ 0 Other. (Please describe) _____

13d. If more than one of these reasons was important for not working, pick out the reason in the list above which is second most important to you and put a "2" beside it. If you have any more important reasons, place the numbers (3, 4, etc.) in the blanks beside the reasons (ending with your least important reason).

FOR ALL STUDENTS:

14. How did your parents feel about your working or not working during the school year? Please describe briefly.

Mother _____

_____

Father _____

_____

IF YOU HAVE NEVER BEEN EMPLOYED FOR PAY DURING ANY SCHOOL YEAR, **and never worked summer-only, SKIP TO QUESTION 40**

FOR WORKERS:

IF YOU WORKED FOR PAY DURING ANY SCHOOL YEAR IN HIGH SCHOOL (DO NOT INCLUDE SUMMER EMPLOYMENT HERE), CONTINUE WITH QUESTION 15.

15. Where do you work? Give the name or title of your present job, company, etc. Be as specific as possible ("waiter/waitress at Joe's," "salesperson at a record store," "grocery store check-out person at Bill's", etc.).

_____

16. **Describe what you actually do on this job** ("serve food to customers, wash dishes", etc.).

_____

18. **Which one of the following best describes your feelings about your present job?** (CIRCLE ONLY ONE ANSWER)

1 I would like to continue in the job I have now after I get out of school.

2 I would like to get a different job, but in the same kind of business, after I get out of school.

3 I would not like to stay in this kind of business or in this job after I get out of school.

19. **What was your main reason for getting a job?**
Circle only one answer and put a "1" in the blank beside it.

_____ 1 I wanted job experience for the future.

_____ 2 I got a job in order to meet new friends.

_____ 3 I didn't really have to work, but I wanted to have money for "extras".

_____ 4 I got a job in order to earn money for things I really needed.

_____ 5 I got a job to meet financial obligations (ex. car payments).

_____ 6 I thought working would be interesting.

_____ 7 My parents put pressure on me to get a job.

_____ 8 I had a lot of extra time on my hands and wanted something to do.

19a. **If more than one of these reasons was important for working, pick out the reason in the list above which is second most important to you and put a "2" beside it.** If you have any more important reasons, place the numbers (3, 4, etc.) in the blanks beside the reasons (ending with your least important reason).

20. **How many hours do you usually work each week?**

_____hours per week.

20 a. **Are these hours all on the weekends?**

1 Yes

2 No

21. **What is the average amount of your pay at your job?**

a. $$ per hour _____ OR

b. $$ per week _____

FOR NONWORKERS, SKIP TO QUESTION 40

FOR WORKERS WHO HAVE HAD MORE THAN ONE JOB IN HIGH SCHOOL:

22. Give the name or title of the job(s) you had **before** your present job. Be as specific as possible (cook at fast food restaurant).
    If summer-only job(s) check here ___

    Job 1 _____

    Job 2 _____

23. Describe what you actually did on that job (those jobs).

    Job 1 _____

    Job 2 _____

24. On the average, how many hours a week did you usually work at that job (those jobs)?

    Job 1 _____

    Job 2 _____

25. What was the average hourly or weekly amount of your pay at that/those job(s)?

    Job 1 _____

    Job 2 _____

26. Do you work on a farm?

    1 Yes

    2 No

    IF YES: 26a. Do you work on your family's farm?

    1 Yes

    2 No, I work for another farmer

    IF YES: 26b. How many **hours** a week do you work?

    _____1 For pay

    _____2 Not for pay

NONWORKERS and SUMMER-ONLY WORKERS, Skip to Question 40

WORKERS, Go on to the next page, Question 27

FOR WORKERS:

27. **Please indicate how much you agree or disagree with each statement below. Circle one number for each item from (a) TO (f).**

		Strongly Agree		Somewhat Agree		Somewhat Disagree		Strongly Disagree
a.	My job requires that I keep learning new things	1		2		3		4
b.	A lot of people can be affected by how well I do my work	1		2		3		4
c.	I have a lot of say about what happens while I'm at work	1		2		3		4
d.	My job lets me use my skills and abilities	1		2		3		4
e.	The product or service I help provide is up to the standards that the public should get	1		2		3		4
f.	I feel that most of the things I do on my job are meaningless	1		2		3		4

FOR WORKERS:

28. **Please choose the response that best describes how often you have done each of the following since you began your job(s) that you've worked this academic year. CIRCLE ONE NUMBER FOR EACH ITEM FROM (a) TO (i).**

		Often		Sometimes		Rarely		Never
a.	Called in "sick" or with a phony excuse when you didn't want to go to work	1		2		3		4
b.	Put more hours on your time card than you actually worked	1		2		3		4
c.	Came to work "high" on drugs or alcohol or used drugs or alcohol at work	1		2		3		4
d.	Purposely short-changed a customer	1		2		3		4
e.	Lied to your employer about your age or something else in order to get or keep your job	1		2		3		4
f.	Taken money from the place you work	1		2		3		4
g.	Given goods or services for free or for less money than you should have to people who visit the place you work	1		2		3		4
h.	Taken things from the place where you work or from other people who work at the same place you do	1		2		3		4
i.	Purposely damaged or destroyed property belonging to your employer (including letting something break down so you wouldn't have to work until it was fixed)	1		2		3		4

IF YOU HAVE WORKED AT ALL DURING ANY SCHOOL YEAR, PLEASE CONTINUE WITH QUESTION 29

29. About how many days were you absent from your job(s)? (CIRCLE ONLY ONE)

1 Almost never absent

2 A few days

3 Once or twice a month

4 About once a week

5 More than once a week

30. When you have a conflict between being at your job and attending school, which would you do?

1 Attend school

2 Go to work

30a. Why did you choose this answer? _____

31. For the most part, how much do you enjoy going to school?
(CIRCLE ONLY ONE)

1 I don't ever enjoy school

2 I only enjoy school once in a while

3 I enjoy school quite a lot of the time

4 I almost always enjoy school

32. If you were given the choice, which would you rather do?
(CIRCLE ONLY ONE)

1 Spend all the time working and not go to school.

2 Spend more time working and less time at school.

3 Continue to spend about the same amount of time at school and work as you do at present.

4 Spend more time at school and less time working.

5 Spend all the time at school and no time working.

33. What has been the greatest benefit to you of working while you are in school?

_____

_____

34. What has been the biggest problem you have had with working while you are going to school?

_____

_____

35. How have you handled this problem?

_____

_____

36. Have you ever requested deadline extensions (for tests, written assignments, etc.) from teachers because of your job?

1 Yes

2 No

Please explain either answer _____

_____

37. How do you feel about the way teachers responded to your requests?

_____

_____

38. What changes, if any, do you think teachers should make for students who have jobs?

_____

_____

39. If you were given the same amount of money without working that you earn/earned from your job, would you still have wanted to work?

1 Yes

2 No

SECTION III. EDUCATIONAL INFORMATION

40. **What is your grade point average in school this year?** (CIRCLE ONLY ONE)

1 About an A average

2 About a B+ average

3 About a B average

4 About a C+ average

5 About a C average

6 About a D average

7 About an F average

41. **About how many days on the average have you been absent from school since September?** (CIRCLE ONLY ONE)

1 Almost never absent

2 A few days

3 Once or twice a month

4 About once a week

5 More than once a week

FOR NONWORKERS, SKIP TO QUESTION 44.

42. FOR WORKERS:
Since you started working, have you noticed any changes in your grades? (CIRCLE ONLY ONE)

1 My grades are much better

2 My grades are a little better

3 No, my grades are the same as before

4 My grades have gone down a little

5 My grades have shown a big drop

43. FOR WORKERS:
Since you started working, have you noticed any change in the number of days you are absent from school? (CIRCLE ONLY ONE)

1 Absent much less often

2 Absent a little less often

3 No change

4 Absent a little more often

5 Absent much more often

44. On the average, about how many hours per week do you spend doing each of the following? CIRCLE ONLY ONE NUMBER FOR EACH ITEM FROM (a) TO(f)):

	None	Less than 2 hours	3-6 hours	7-12 hours	13-20 hours	21 or more hours
a) Participating in school clubs, teams, committees or activities	1	2	3	4	5	6
b) Doing homework or studying	1	2	3	4	5	6
c) Getting together with or talking on the phone with friends	1	2	3	4	5	6
d) Watching TV	1	2	3	4	5	6
e) Reading books, magazines or newspapers for pleasure	1	2	3	4	5	6
f) Looking for or buying things in stores	1	2	3	4	5	6

SECTION IV. MONEY ISSUES FOR A HIGH SCHOOL STUDENT

45. Do you have any of the following things at the present time?

Yes No a) A checking account of your own.

Yes No b) Use of a parent's checking account or a joint checking account with a parent.

Yes No c) A savings account of your own.

Yes No d) Use of a parent's savings account or a joint savings account with a parent.

Yes No e) Use of your own credit card.

Yes No f) Use of a parent's credit card or joint credit card with a parent.

46. Do you get an allowance from your parents <u>now</u>?

1 Yes

2 No

IF YES: 46a. How much is your allowance?

$_____ per week

46b. Are you expected to do anything in return for your allowance, for example, household chores?

1 Yes

2 No

FOR NONWORKERS, SKIP TO QUESTION 49

47. FOR WORKERS:
Now that you are working, how much do you help out around the house?
(CIRCLE ONLY ONE)

1 A lot less than before

2 A little less than before

3 About the same as before

4 A little more than before

5 A lot more than before

48. FOR WORKERS:
Did you get an allowance from your parents before you began working?

1 Yes

2 No

IF YES: 48a. Do you still get an allowance now that you are working?

1 Yes

2 No

49. **How much of your money do you save?**
(CIRCLE ONLY ONE)

1 None of my money

2 Less than one-quarter of my money

3 About one-half of my money

4 About three-quarters of my money

5 All of my money

50. **Which of the following statements is most true about the way in which you <u>usually</u> spend money?** (CIRCLE ONLY ONE)

1 I buy what I want or need whenever I see it.

2 I put aside a certain amount of money for one or two things, and then spend the rest on whatever I need or want.

3 I make a very detailed plan of how I want to spend my money and stick to it.

4 I don't have to plan how to spend my money because my parents buy me whatever I need.

51. **Do your parents agree with how you use your money?**

1 Yes Please explain _____

2 No Please explain _____

52. **How do you NOW pay for the following things?**
CIRCLE ONLY ONE NUMBER FOR EACH ITEM FROM (a) TO (q).

	My parents pay for this.	I pay for this with my own money (allowance, earnings, gifts).	My parents and I share the cost of this.	I don't buy this.
a) basic clothes needed for school	1	2	3	4
b) extra clothes	1	2	3	4
c) records / tapes	1	2	3	4
d) books	1	2	3	4
e) movies / concerts	1	2	3	4
f) cigarettes	1	2	3	4
g) my own telephone bill or telephone calls	1	2	3	4
h) stereo equipment	1	2	3	4
i) musical equipment (e.g., guitar, amplifier)	1	2	3	4
j) sports equipment	1	2	3	4
k) bicycle / moped	1	2	3	4
l) eating out	1	2	3	4
m) car or motorcycle	1	2	3	4
n) gas	1	2	3	4
o) vacations or trips	1	2	3	4
p) car or motorcycle insurance	1	2	3	4
q) family/household expenses	1	2	3	4

53. **Are you [illegible] saving money for any of the following things?**

Yes No a) Car or motorcycle

Yes No b) Insurance for a car or motorcycle

Yes No c) Musical equipment (instruments, stereo)

Yes No d) Vacation or trip

Yes No e) Education after high school

Yes No f) Other - Please describe _____

SECTION V. FRIENDS AND FAMILY

FOR NONWORKERS, SKIP TO QUESTION 57

54. FOR WORKERS:
Since you began working, how are you getting along with your parent(s)? (CIRCLE ONLY ONE)

1 Better than before I started working

2 About the same as I always have

3 Worse than before I started working

55. FOR WORKERS:
Now that you are working, do you notice that your parent(s) treat(s) you differently? (CIRCLE ONLY ONE)

1 they give me a lot more freedom

2 they give me a little more freedom

3 no difference

4 they give me less freedom

56. FOR WORKERS:
Since you began working, how much time do you spend on the following activities? CIRCLE ONE NUMBER FOR EACH ITEM FROM (a) TO (f).

	Less time than before	About the same time as before	More time than before
a) Participating in school clubs, teams, committees, or activities	1	2	3
b) Doing homework or studying	1	2	3
c) Getting together with or talking on the phone with friends	1	2	3
d) Watching TV	1	2	3
e) Reading books, magazines or newspapers for pleasure ...	1	2	3
f) Looking for or buying things in stores	1	2	3

SECTION VI. FUTURE PLANS

57. **What occupation would you most like to have when you finish your education? Be as specific as you can.**

_____

_____

58. **For a number of reasons, people do not always end up with the kind of occupation they had wished for. What kind of job do you actually think you will hold when you have finished your education? Be as specific as you can.**

_____

_____

59. Do you eventually expect to have a better job than your parents?

1 Yes. Please explain. _____

2 No. Please explain. _____

60. **When you've finished your education and start to look for your first full-time job, how important will some of these things be to you? Below is a list of things which people consider important in their work. Some of these things may be very important to one person, but not to another. We would like for you to indicate how important each one is to you by circling the appropriate number after each. CIRCLE ONLY ONE NUMBER FOR EACH ITEM FROM (a) TO (j).**

	Very Important	Somewhat Important	Not too Important	Not at all Important
a) Work in which I can help others	1	2	3	4
b) Work in which I have authority over others	1	2	3	4
c) Work in which I try out new ideas and suggestions	1	2	3	4
d) Work in which I make my own decisions	1	2	3	4
e) Work in which I form friendships with my fellow employees	1	2	3	4
f) Work I know that others consider important	1	2	3	4
g) Work in which I do many different things	1	2	3	4

60. **Continued**

	Very Important	Somewhat Important	Not too Important	Not at all Important
h) Work in which I have a good place in which to work (good lighting, quiet, clean, enough space, etc.)	1	2	3	4
i) Work in which I am sure of another job in the company if my present job ends	1	2	3	4
j) Work in which I can earn a lot of money	1	2	3	4

61. **Below are qualities that can be used to describe people. Which qualities would you most like to have?** Please arrange all ten qualities in order of their importance to you. They are listed in alphabetical order.

Study the list carefully and **pick out the one** which is the **most important** to you. Then put a **"1"** beside it.

Pick out the quality which is **second most important** to you and put a **"2"** beside it. Do the same thing for each of the remaining qualities until you have rated the one which is the least important, **"10"**.

_____ ambitious (hard-working, aspiring)

_____ broadminded (open-minded)

_____ capable (competent, effective)

_____ cheerful (light-hearted, joyful)

_____ helpful (working for the welfare of others)

_____ honest (sincere, truthful)

_____ imaginative (daring, creative)

_____ independent (self-reliant, self-sufficient)

_____ obedient (dutiful, respectful)

_____ responsible (dependable, reliable)

SECTION VII. STUDENT ATTITUDES AND OPINIONS

62. **We are interested in the opinions each of you may have. Try to go through this section of the questionnaire quickly, without spending too much time on any one question. REMEMBER, this is not a test. There are no right or wrong answers. Feel free to answer each question exactly the way you feel.**

CIRCLE THE NUMBER THAT MOST CLOSELY INDICATES HOW MUCH YOU AGREE OR DISAGREE WITH EACH STATEMENT BELOW.

	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
1) Workers are entitled to call in sick when they don't feel like working.	1	2	3	4
2) The best things in life are free.	1	2	3	4
3) I would rather not work in an environment where there are people of different races or skin color.	1	2	3	4
4) Very often I forget work I am supposed to do.	1	2	3	4
5) It's not very practical to try to decide what kind of job you want because your future job depends so much on other people.	1	2	3	4
6) A person is responsible only for the happiness of his family, relatives and close friends.	1	2	3	4
7) In my opinion, it's alright for workers who are paid a low salary to take little things from their jobs to make up for it.	1	2	3	4
8) When a job turns out to be much harder than I was told it would be, I don't feel I have to do it perfectly.	1	2	3	4
9) Someone often has to tell me what to do.	1	2	3	4
10) People who say they don't need to own things to make them happy are only kidding themselves.	1	2	3	4
11) It is much more satisfying to work for your own good than to work for the good of a group you belong to.	1	2	3	4

Attitudes and Opinions, continued

	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
12) I don't know whether I like a new outfit until I find out what my friends think.	1	2	3	4
13) If I had the chance, I'd go through life without ever working.	1	2	3	4
14) Even if it's illegal to hire teenagers to do certain jobs, it's okay for an employer to do it to help a kid out.	1	2	3	4
15) It's more important for a job to pay well than for a job to be very interesting.	1	2	3	4
16) When things go well for me, it is usually not because of anything I myself have done.	1	2	3	4
17) It's acceptable to me if a teenage worker cheats a little to make a profit.	1	2	3	4
18) I would not want to work closely with a person who had very different social skills from me.	1	2	3	4
19) If I owned a Ford, I'd probably want a Porsche.	1	2	3	4
20) I wouldn't like to go on a weekend trip with people who have a different ethnic background from me.	1	2	3	4
21) I seldom get behind in my work.	1	2	3	4
22) I feel very uneasy if I disagree with what my friends think.	1	2	3	4
23) It's not really my problem if my coworkers are in trouble and need help.	1	2	3	4
24) People who break a few laws to make a profit aren't doing anything I wouldn't do in their position.	1	2	3	4

Attitudes and Opinions, continued

		Strongly Agree		Slightly Agree		Slightly Disagree		Strongly Disagree
25)	Work provides people with the chance to really make something special out of their lives.	1	.....	2	.....	3	.....	4
26)	There's no such thing as a company that cares about its employees.	1	.....	2	.....	3	.....	4
27)	I often leave my homework unfinished if there are a lot of good TV shows on that evening.	1	.....	2	.....	3	.....	4
28)	My goal in life is to make a lot of money and buy a lot of things.	1	.....	2	.....	3	.....	4
29)	Time you spend helping others get what they want would be better spent trying to get what you want.	1	.....	2	.....	3	.....	4
30)	It is best to agree with others, rather than say what you really think, if it will keep the peace.	1	.....	2	.....	3	.....	4
31)	I often don't finish work I start.	1	.....	2	.....	3	.....	4
32)	I feel kind of bad when a friend buys me a present that obviously didn't cost much.	1	.....	2	.....	3	.....	4
33)	People who work harder at their jobs than they have to are a little strange.	1	.....	2	.....	3	.....	4
34)	I would not mind working closely on a job with a person whose skin color is different from mine.	1	.....	2	.....	3	.....	4
35)	The main reason I'm not more successful is that I have bad luck. ..	1	.....	2	.....	3	.....	4
36)	Most people today are stuck in deadend, go-nowhere jobs.	1	.....	2	.....	3	.....	4
37)	Workers who let equipment on the job break down so they can "take a rest" should be fired by employers.	1	.....	2	.....	3	.....	4

Attitudes and Opinions, continued

		Strongly Agree		Slightly Agree		Slightly Disagree		Strongly Disagree
38)	A job provides a worker with a lot more good things than just a paycheck.	1	.....	2	.....	3	.....	4
39)	Adults who have honestly acquired a lot of wealth really have my respect and admiration. ...	1	.....	2	.....	3	.....	4
40)	Employers should "look the other way" if the people who work for them take little things now and then.	1	.....	2	.....	3	.....	4
41)	I find it hard to stick to anything that takes a long time to do.	1	.....	2	.....	3	.....	4
42)	Hard work really doesn't get you much of anything in this world.	1	.....	2	.....	3	.....	4
43)	Money burns a hole in my pocket; if I have it, I spend it.	1	.....	2	.....	3	.....	4
44)	If I saw a worker on the job take something that didn't belong to him, I'd hope he'd get in trouble for it.	1	.....	2	.....	3	.....	4
45)	You can't be expected to make a success of yourself if you had a bad childhood.	1	.....	2	.....	3	.....	4
46)	I hate to admit it but I give up on my work when things go wrong.	1	.....	2	.....	3	.....	4
47)	Work is lots more than a necessity of life that people have to learn to put up with.	1	.....	2	.....	3	.....	4
48)	If a worker agrees to work on a job that is harmful to his health and against the law, his employer shouldn't be held responsible for what happens.	1	.....	2	.....	3	.....	4
49)	Work gives a person a feeling of self-respect.	1	.....	2	.....	3	.....	4
50)	It seems that the more money I have, the more things I want to buy.	1	.....	2	.....	3	.....	4

Attitudes and Opinions, continued

		Strongly Agree		Slightly Agree		Slightly Disagree		Strongly Disagree
51)	Why work for something that others will enjoy if you won't be alive to enjoy it too?	1	.....	2	.....	3	.....	4
52)	I tend to go from one thing to another before finishing any one of them.	1	.....	2	.....	3	.....	4
53)	Luck decides most things that happen to me.	1	.....	2	.....	3	.....	4
54)	I believe in working only as hard as I have to.	1	.....	2	.....	3	.....	4
55)	Running a business is enough of a hassle for an employer without worrying about obeying child labor laws.	1	.....	2	.....	3	.....	4
56)	People who take their work home with them probably don't have a very interesting home life.	1	.....	2	.....	3	.....	4
57)	It's better to have a rich friend than a poor friend.	1	.....	2	.....	3	.....	4
58)	In a group I prefer to let other people make the decisions.	1	.....	2	.....	3	.....	4
59)	I would rather use my time at work for my own advancement than for the advancement of the work group.	1	.....	2	.....	3	.....	4
60)	It doesn't matter if a business-man bends the law to make a profit.	1	.....	2	.....	3	.....	4

Thank You Very Much

94 111DU1 TH
03/94 46620
4030